Memo from the Editor

Each day, rolling marketward on the nation's highways, are thousands of milk tank trucks.

Recently we had occasion to drive along a road that was served as main route for the tankers. In the space of two hours we counted thirty-eight trucks outward bound. Telling the tale of this Bunyanesque feat of transportation were signs on the sides of the trucks. In letters fully three inches high and easily read without the aid of a magnifying glass at a distance of twenty feet was the stirring legend, MILK AND MILK PRODUCTS. Smart, that's what. Don't let folks know what's in those trucks. Make 'em guess.

N.M.

American MILK REVIEW

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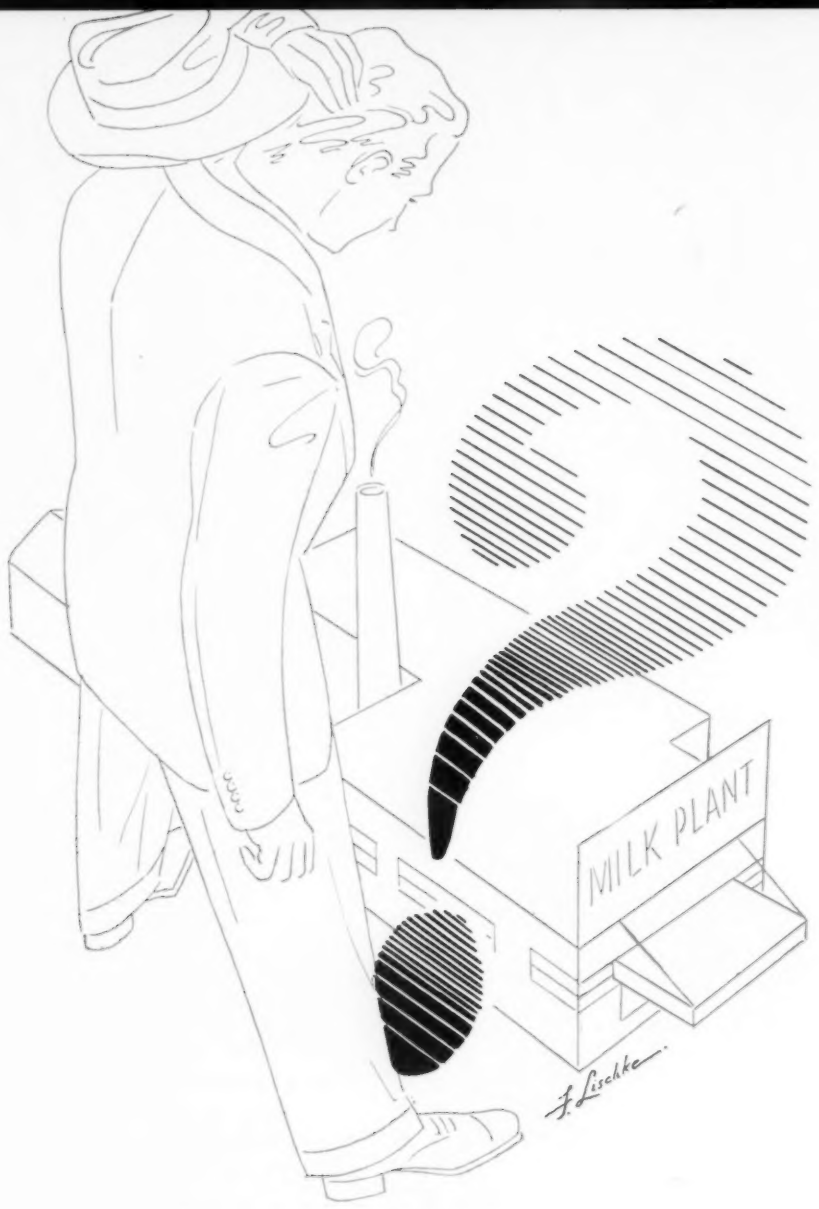

A CITY OW
is it a

Exclusive feature

"Are you willing to sell your business and equipment to the city?" That was the double-shotted question tossed into the laps of milk dealers in Jamestown, New York last August. It was the opening salvo in a rejuvenated campaign to put the city in the milk business. The climax will be reached in the next month or two when the citizens of Jamestown will be called upon to vote "Yes" or "No" on the proposition of municipal ownership of a milk plant for receiving, processing and delivering milk and milk products in the local market.

If the people of Jamestown support the idea the city will build a new milk plant which, with equipment and working capital, will involve about a million dollars. Milk dealers presently supplying the city with milk will be bought out if they are willing to sell. Those not willing to sell will apparently be allowed to stay in business and compete with the city.

The proposal has simmered for a number of years. Samuel A. Carlson, Mayor Emeritus of Jamestown, has been a long and vigorous exponent of the project. No stranger to propositions of this nature, Carlson gained national recognition some years ago when he headed a fight for civic ownership of the local electric utility. This was the first such proposal to be successful in the United States.

The reason for the sudden activity in the municipal milk plant battle is somewhat obscure. According to one prominent dealer, a woman, visiting a session of the city council last summer, arose and objected to differences in prices paid to milk producers. This touched off a proposal by the mayor, Samuel Stroth, that a committee be set up to look into the local milk distribution problem, long a sore spot in Jamestown because of Samuel Carlson's thinking. As a result of Mayor Stroth's suggestion a group composed of Carlson, Carl Nelson, a former milk dealer, and other citizens, including several members of the city council, became the Jamestown Municipal Milk Plant Committee.

"That was last August," explained F. T. Peterson, secretary of the committee and city controller. "We promptly got out a questionnaire to all milk dealers."

The questionnaire went as follows: (slightly briefed)

"To milk dealers supplying milk and milk products to the general public in Jamestown — a committee has been appointed by the president of Jamestown city council to investigate the feasibility of establishing a Municipal Milk Plant in the City of Jamestown to process and distribute milk to the general public.

"To assist the committee in their

"...OWNED MILK PLANT... it a sign of things to come?

By WALTER RUDOLPH

study of the milk problem and the proposal to establish a Municipal Milk Plant, it is respectfully requested that you fill in answers to the questions listed below and return same in the enclosed self-addressed and stamped envelope, on or before August 29, 1949.

1—In the event that the proposal to establish a Municipal Milk Plant is approved by the City Council, are you willing to sell your milk business and equipment to the city?

2—If "yes"
(a) Please list your equipment and selling price.
(b) Please list your trucks and selling price.

3—Would you sell without real estate?

4—If answer "no" to question 3, please describe real estate and price.

5—What would be the cost of good will?

6—What is your average daily sales of
(a) Quarts of milk retail
(b) Quarts of milk wholesale
(c) Quarts of cream

7—Do you sell other milk products such as butter, cheese, milk sugar, buttermilk, casein?

8—If answer to question 7 is "yes" please indicate the average quantities sold daily of each by-product.

9—What is general attitude toward the establishment of a Municipal Milk Plant to supersede the present distribution of milk by many dealers?"

Duplicate copies of this questionnaire were enclosed, for file purposes, cooperation was requested, etc., by secretary Peterson.

"With the exception of two dealers," said Peterson, "we found all willing to sell out. Prices were debated and we found we had to attempt a standardization of same based upon equipment condition, real estate value, quartage sold and so forth.

Several trips were made to Albany, N. Y., where we got the kind assistance of Kenneth Fee in the State dairy control department in developing statistical data on the Jamestown milkshed to aid us in computing figures on milk plant operation," he continued.

Plans were developed for the physical facilities of a Municipal Milk Plant, and these plans were approved by the State dairy department at Cornell University.

Civil service was even looked into. New York State officials gave Peterson an outline of the procedure that would be necessary in employing labor at such a city-owned plant. Such employees would enjoy rights similar to other municipal employees, including pensions, organizational privileges and so forth. Cornell suggested that if a city referendum went through for the milk plant, a manager should be appointed immediately to coordinate the task of establishing the plant.

Now look at the report submitted by the Municipal Milk Plant Committee in January: (to mayor and council)

". . . We find that it would be for the welfare and benefit of every man, woman and child in the city of Jamestown to build and establish such a Municipal Milk Plant for several reasons.

"First, from a health standpoint, we recommend building on city-owned property, a new and modern plant constructed of steel and concrete. All floors and walls in rooms where milk is to be handled would be of tile construction. All roofs

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Key figures on the Municipal Milk Plant Committee are F. T. Peterson, city controller and secretary of the group; Carl Nelson, chairman, and former milk dealer himself; L. E. Adams, accountant, and Samuel A. Carlson, Mayor Emeritus, Jamestown, who has advocated a Municipal Milk Plant for 30 odd years.

would be reinforced concrete and insulated to prevent condensation.

"Second, we further recommend installation of all new and most modern equipment; all holding and storage tanks to be of stainless steel or glass lined; all pasteurizers and sanitary pipes and fittings of stainless steel construction.

"Third, samples of milk will be taken daily from each and every producer as the milk is taken in at the receiving platform. Samples will then be taken to our own Municipal Laboratory in the plant where tests will be run and records kept of all milk received for further references.

"Fourth, all milk will be handled and kept under the most sanitary conditions and constant inspection. For example, after the milk is taken in at the receiving vat, it will not be exposed to the human eye until it is filled at bottling units where the bottles are run on conveyors into the coolers. All milk received must measure up to a certain standard and specifications in quality, as we propose to engage our own sanitary dairy inspector who will assist the producer by suggesting what can and should be done to produce a higher standard of quality of milk.

"We believe it possible and propose to deliver milk to your door at a lower price than now paid for the following reasons;

"First, our study of operations of a proposed Municipal Milk Plant, based on sales of businesses now under option, reveals that reduction in price of milk to the consumer will still show a margin of profit. In all probability, actual experience may prove that further reduction in selling prices can be made.

Second, a Municipal Milk Plant will eliminate, at the present time, 12 dairy plants now in operation on which options have been received.

"Third, we will have one truck on a street serving from 60% to 100% of the families on that street where you now will find from 2, 12 or 15 trucks delivering on the same street.

"Fourth, on the operating expenses of our trucks a great saving will be made because purchase of all gasoline and some parts and the equipment itself including licenses will be tax free . . . approximately 20 to 25% saving. . . .

"Fifth, we will also make a considerable saving at the plant, by using steam from the city light plant. The steam line that it is proposed to use now runs on the property to be utilized for the plant. This would be a saving of approximately $40,000.00, estimated cost of a boiler room, boilers and other equipment plus operating costs.

"In order to go into the milk distributing business, we decided it was only fair to contact the local distributors to find out if they were willing to dispose of their business and at what price. We are now informed that 75 to 90% of the dealers are willing to sell out to the city and we have also received signed options from 15 of the dealers whom are willing to the city.

"Their trucks, equipment, real estate and good will would be purchased at a price suitable to them and the committee. We find that this would amount to about $543,640.00. We have also obtained appraisals of the real estate and creamery equipment which we could not use and which we could dispose of at about $147,775.00. This will leave a net figure of $395,865.00.

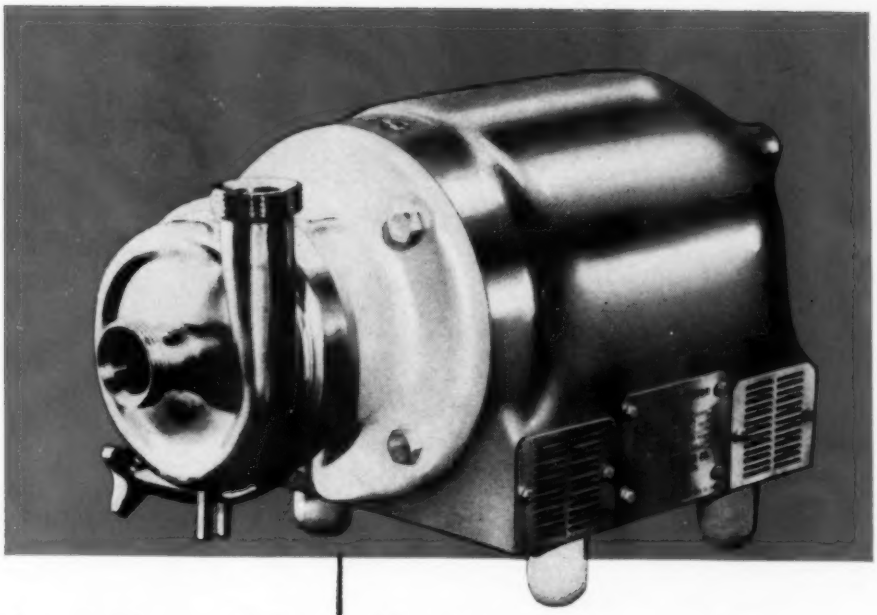
"We have also had surveys made by architects whom have made a life study of building milk plants and are

(Please turn to Page 72)

NINETY PERCENT CUT

Dairymen got a break from the Benton Harbor (Mich.) city commission recently in the form of a reduction of license fees for their delivery wagons from $10 each to $1. The change was approved unanimously on suggestion of Mayor Leon P. Gideon, who said the $10 charge represented far more than the cost of inspecting the wagons to insure cleanliness.

As the license fees now stand, each dairy must pay a $15 plant fee, $10 for the first delivery wagon, and $1 each for all additional wagons.



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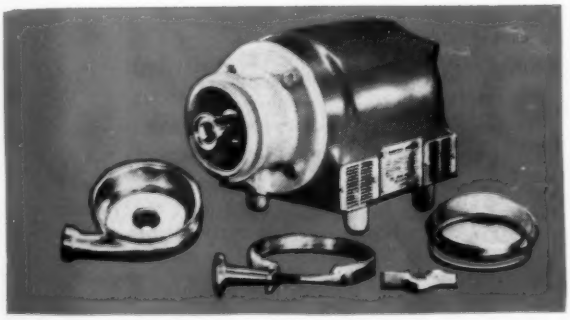

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ARIEL C. MERRILL

Portrait of a Dairyman

ONE HUNDRED and three years ago the great Mormon leader, Brigham Young, lead a handful of followers over the spiked parapet of the Wasatch Mountains to the land known then as the Great American Desert. In this region, shunned by traveler and trapper alike, the tiny band elected to build their community. To the fierce Ute indians from whom the land took its name they brought peace and friendship. To the arid expanse of plain they brought water and sweat that gave fulfillment to the promise that the "desert shall blossom like a rose". And on the eastern shore of the mighty salt lake they built the great city.

In the broad pageantry of Utah's history, as in any history for that matter, one often misses the trees and sees only the forest. But the trees were there in the form of people who slugged it out with the dry wilderness. The trees were sheep dips and branding irons, fences and water holes, wheat fields and the Union Pacific. The trees were courage, intelligence, labor, and an indomitable will.

Cloverleaf Dairy is one of Utah's builders just as surely as the bearded pioneers of a century past were builders. Each day close to 125,000 pounds of milk goes into the company's weigh cans. Sixty retail and fifteen wholesale routes distribute the finished products to the customers in the market area. Boss of this enterprise that has meant so much to the community is Ariel C. Merrill, Vice-president and General Manager of Cloverleaf Dairy and General Manager of the Coleville Ice Cream Company.

Mr. Merrill is a product of Utah. Save for a brief sortie into Michigan where he captured a Masters Degree at East Lansing, he has spent his life in Utah and the dairy business. He is a graduate of Utah's agricultural college where, for a time, he served as professor of Dairy Manufacturing. But the particularism that one often finds in men who have remained too close to their birthplace finds no favor with him. His outlook and his influence have extended far beyond the head waters of the Colorado. He is a past director of the International Association of Ice Cream Manufacturers and is serving a second term as a director of the Milk Industry Foundation. As chairman of the Foundation's Industrial Relations Com-

(Please turn to Page 59)

NEW! Firestone Stainless Steel MILK CANS

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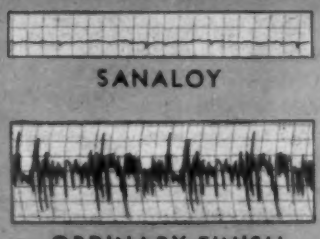

The two graphs above show the comparative smoothness of two milk can surfaces as measured by a highly sensitive instrument called a Profilometer. At top is a picture of the Firestone Stainless Steel Sanaloy Finish — hardly a wave in the line — glassy smooth, easily cleaned. At bottom, No. 4 finish stainless steel, which is used extensively for dairy equipment. Actual measurements show Sanaloy Finish is much smoother than a No. 4 polished surface.

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Although Sam Swett and Jack Stanley appear dubious, Dee Graham and Professor Fred Herzer put on the smile of victory as the 1949 Mississippi State College Dairy Products judging team wins the international collegiate classic for the tenth time.

MISSISSIPPI CHAMPIONS

By NORMAN MYRICK

WHEN THE Mississippi State College judging team returned from the wars last fall they had enough loot in their pouches to set themselves up in the hardware business. In addition to their inventory of cups and medals, large enough to make any self respecting congressman call for a Senate investigation, they toted home $850 of prize money in the form of the Dairy Industries Supply Association graduate fellowship.

Continuing, what the competition has come to regard as an unfortunate habit, the Mississippi State College boys were fresh from another conquest in the annual Collegiate Students International Contest in Judging Dairy Products. In a league where the competition is hotter than a tin roof in Natchez, for the tenth time in eighteen tries the name of Mississippi led all the rest.

Paced by Jack Stanley, whose performance on the gridiron is over shadowed only by the sensitivity of his taste buds, the team captured a first in cheese, a sixth in butter, a third in ice cream, and a third in milk. Individually they had a second and ninth in All Products, a first, second and fifth in cheese, a fifth in ice cream, and a fifth in milk.

One is not particularly surprised when Iowa wins, or Wisconsin, or Minnesota. But, although the promise is there, Mississippi is not ordinarily thought of as one of the nation's great dairy regions. The superb record that the teams from State College have established are all the more remarkable because of that fact. There must be a reason for such consistently fine performances. There is. His name is Fred H. Herzer, Professor of Dairy Manufacturing and Head of the Dairy Department at Mississippi State College.

Professor Herzer was five years out of Ohio State when he came to Mississippi in 1919. For thirty-one years he has devoted his energy and his ingenuity to the building of a better dairy industry in the South. On the campus he has seen the dairy department facilities expand from the ice crusher and tub freezer which was the ice cream department in 1920 into a modern dairy building. The sparse equipment of earlier days has been succeeded by fine up-to-date processing machinery. Facilities for manufacturing ice cream, for processing milk, for making cheese, and for manufactured milk products are included in the college dairy plant.

But building an industry demands more than buildings and machinery.

AMR *Exclusive feature*

If you look into the records of the Southern Division of the American Dairy Science Association, or the Mississippi Dairy Products Association, or the Southern Association of Agricultural Workers you will find evidence of Professor Herzer's activity. Chairman of one group, vice-chairman of another, director of a third, he has been a stimulant to Southern dairy thinking.

In the research laboratory as well as in the field and the classroom he has brought his talents to bear on the industry's problems. He has done some excellent work on butter flavor and flavor in dairy products in general. A study on the effect of straining on the quality of milk delivered to manufacturing plants is about to be published.

Professor Herzer is that happy combination of scientist, missionary, and go-getter who knows the trees but has never lost sight of the forest. In the victorious trio of Sam Swett, Dee Graham, and Jack Stanley he has given the latest demonstration of his ability as a teacher and his zeal for a Southern dairy industry.

Richard Jackson Stanley ran a twenty cow dairy for three years while he was in high school. With all that good Mississippi milk in his blood it was only natural that he should gravitate toward the dairy department when he entered college. He

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Putting reverse english on to the old saw these Mississippi State College tasters took all there was to take in the cheese competition. Dee Graham at left was awarded the DISA fellowship. Jack Stanley, in the center, was second in All Products. Sam Swett, at right, was top hand in cheese judging. Sound performances have been characteristic of Mississippi State teams which have won ten out of eighteen starts in the annual collegiate judging contest.

writes, "I enrolled in Mississippi State College in September 1946 and decided to take the course offered in Dairy Manufacturing. During my Junior year I took a short course in Judging Dairy Products. The course was taught by Professor Herzer. During this course Professor Herzer picked three students to make up the judging team to compete in the fall contest at Los Angeles. All of us were very much interested in the course as a chance to make the team and also for the help that it would give us in the future.

"During the time that I have been in college I have been working part time doing work for the college dairy department and inspection work for the Cooperative Creamery. I am at present running plate counts on grade A milk received at the creamery. I am finishing in May and plan to go into a privately owned plant."

Despite the fact that he is one of the best judges of dairy products in collegiate circles in the United States he has found time to carve a place for himself in the Mississippi State community. He played a hard game of football until a back injury forced him to give up the sport. He is a member of five college societies including the Dairy Club and is the secretary of the Student Association. One gets the impression that very little grass has had a chance to grow under Mr. Stanley's competent feet.

Winner of the $850 graduate fellowship offered by the Dairy Industries Supply Assocition is Dee M. Graham of Dixon, Mississippi. Dee Graham, like his team mate Jack Stanley, was introduced to the milk business by way of a dairy farm. His Dad has been producing milk down in Dixon and it was there that Dee learned the fundamental lesson that "product quality means product sales". He says, "I figured that a well qualified judge of dairy products is essential to the dairy business."

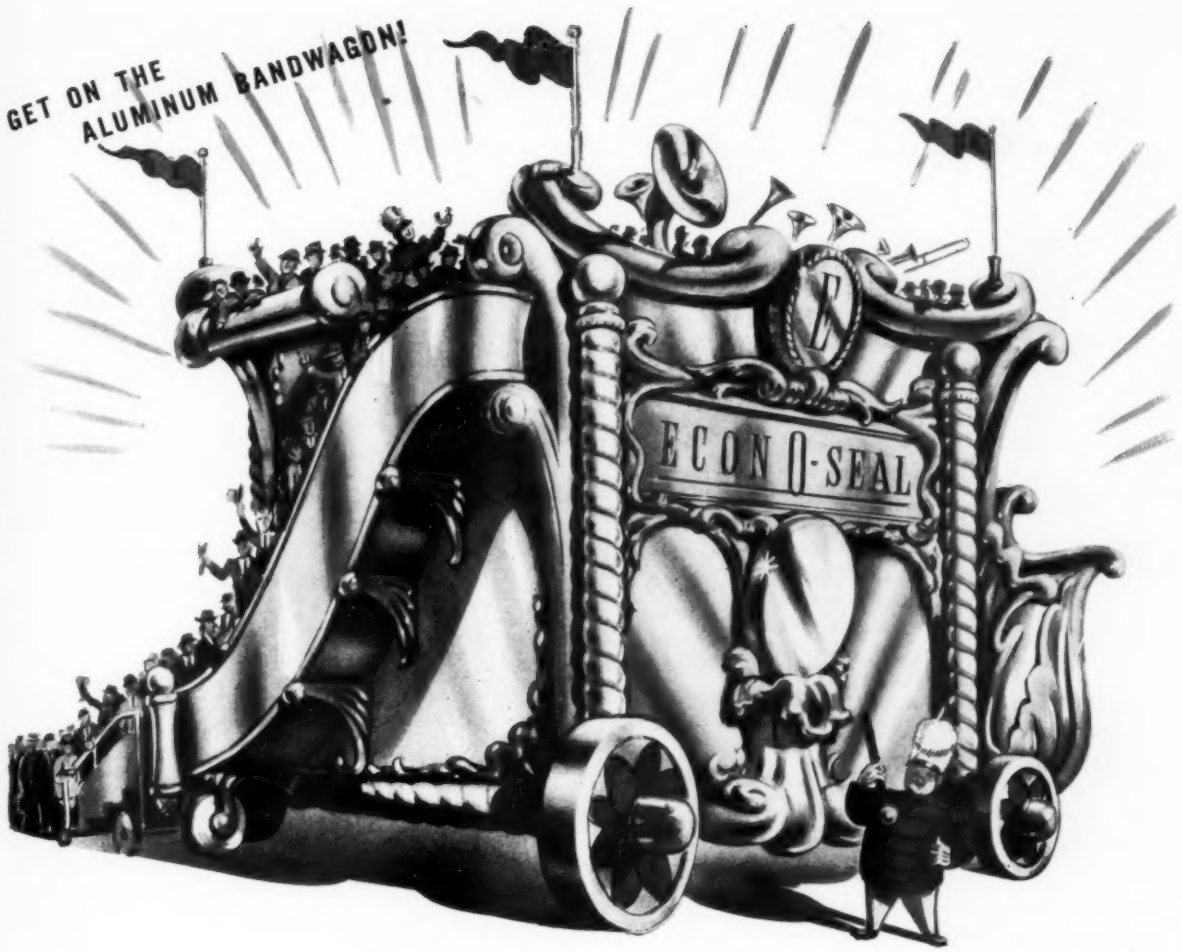
Graham's work under Professor Herzer is only the beginning of a promising career in the dairy industry. He finished his undergraduate studies at Mississippi in January. Last month he entered Iowa State for advanced work.

The team made its best showing in cheese at the Los Angeles contest. They finished one, two and five which is very close to a grand slam. Top honors in this event went to the third member of Professor Herzer's trio, a lad hailing from the historic old city of Vicksburg. Sam Swett is a farm boy. He says, "I have lived on a farm all of my life and, although not a dairy farm, I have always been interested in dairying."

Like his team mates, Sam Swett was ushered into the fascinating world of quality by his teacher. A course in judging dairy products, taught by Professor Herzer brought home the wide variations that characterize dairy products and the great possibilities for quality control and improvement. Natural ability plus good coaching enabled Sam to become the best collegiate judge of cheese in these United States.

There is a great deal more involved in this story of the 1949 champs than simply another tale of three local boys who made good. Here is a superb demonstration of the manner in which ideas are disseminated and nourished. Professor Herzer went from Ohio, a dairy and grain state, to Mississippi, a cotton state. He came armed with a certain knowledge and a teaching ability that it is hard to match. To a land that had evolved under the reign of King Cotton he brought new thoughts and ideas. Sam Swett, Dee Graham, and Jack Stanley are the latest evidence of the zeal and skill with which Professor Herzer has spread the word.

The South has a great potential as a dairy region. As new techniques and new equipment in the dairy industry are developed this potential looms even larger. There is a growing opportunity in that area, an opportunity fostered by such men as Dean Chapman in Georgia, E. L. Fouts in Florida, and Fred Sorrow of the Southern Dairy Products Journal. It is difficult to see in this fine mid-century edition of the long line of Mississippi Champions anything but a prophecy of great things to come.



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The Trend is to—

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Restrictive Health Ordinances Were Given a Jolt When a Circuit Court Judge Found Against

The Five Mile Law In Michigan

By MARY J. PARR

Exclusive feature AMR

Michigan's controversial "five mile law" was dealt a knockout punch Feb. 20 when Circuit Judge Raymond L. Smith ruled against a provision of the Grand Haven, Mich., milk ordinance which restricts the sale of milk in the community to that which has been pasteurized within five miles of the city limits. Most Michigan cities have a similar ordinance, the restrictive distance varying from three to eighteen miles.

Judge Smith rendered his precedent making decision on the premise that "what the legislature permits, a city cannot suppress." In handing down his decision, he ruled that the Michigan legislature has established that if milk meets certain requirements it is "a wholesome product which may lawfully be sold to the public."

Judge Smith said the requirements prescribed by the legislature are that milk be processed according to state law in a licensed plant and transported either before or after pasteurization in a sanitary manner under prescribed temperatures within prescribed time limits. He said that in the records of the case, against the city of Grand Haven, brought by the Grocer's Co-operative Dairy Co., Grand Rapids, the city had admitted the Grand Rapids dairy's product "may well be a legal and wholesome product in Grand Rapids and elsewhere," but contended it could not be sold in Grand Haven unless approved by inspectors selected by the city. Judge Smith ruled this stand in the restrictive provision of the city's milk ordinance is a contravention of state law. The jurist said he found no issue of constitutional law involved in the case.

However, later on the day of the ruling, the Grand Haven city council voted unanimously to continue the fight for the sanctity of the ordinance, and directed the city attorney to file an appeal with the state supreme court.

Grocer's Co-operative Dairy, managed by George C. Cope, has been a leader in the battle to test the legality of the "five mile law". In 1948 the firm brought a constitutional challenge of the ordinance in federal district court in Grand Rapids, charging restraint of trade, but the case was dismissed on the grounds of "no controversy." Early in 1949 the dairy re-filed the suit in Grand Rapids federal court, but it is now being held inactive under an agreement between the city and the plaintiff.

To thwart the "no controversy" ruling, Grocer's Co-operative, which pasteurizes its products in Grand Rapids, approximately 30 miles from Grand Haven, and had been refused a license to sell in Grand Haven for that reason, placed milk on sale in a Grand Haven retail store on June 13, 1949. The city council, informed that two quarts of the milk had been purchased, authorized the city attorney to take legal action. On June 16 the city obtained a temporary injunction, prohibiting Grocer's Co-operative from selling in Grand Haven. The city also filed suit in circuit court asking that the court uphold the city ordinance. On Aug. 5 the court denied a motion by counsel for the dairy that the injunction be dissolved. The case was heard in October, the injunction remaining in effect until Judge Smith's decision was announced in February.

Stirred Up the Dust

Judge Smith's decision, which amounts to outlawing restrictive milk ordinances on a distance-from-the-city basis, brought immediate reaction all over the state. In Lansing, F. M. Skiver, chief of the state agricultural bureau of dairy industry, opined that

NO SOONER SAID THAN DONE

An effective date of April 1, 1950, has been placed on a new milk ordinance for Kalamazoo, Mich., which will enable dairy plants outside the city to sell milk within the city limits. The new ordinance parallels a recently adopted county ordinance which permits city plants to sell throughout the county.

Under a new inspection fee arrangement, the Kalamazoo milk shed will extend indefinitely and the fees will be paid by the milk plants rather than the producers. Most Michigan cities have a "five mile law" which provides that a dairy selling milk in the city must process the milk within five miles of the city limits.

XUM

CELLOPHANE HOODS

Can Make the Difference Between BIG and Little PROFITS

WEATHER-RESISTANT !
TAMPER-PROOF !

More and more, smart milk packaging is gaining proper recognition as the most effective first step to take in building increased sales volume for promotion-minded dairies. As far as consumers are concerned milk is about the same everywhere. Smart packaging and sound promotion can make the difference between big and little profits.

Cellophane offers the colorful sales appeal — eye appeal, visual protection and convenience features. These are the features that have gained top leadership for Cellophane in the field of food packaging. Yet it costs you less per bottle than any similar hood-type packaging.

SMITH-LEE Actually Helps you SELL with a CUSTOM-BUILT Advertising-Merchandising Plan

to Cellophane Hood Dairies

• Newspaper Mats • Radio Scripts plus Sales Promotion Guidebook "How to Increase Your Sales Force by Hundreds" . . . how to budget and plan your advertising.

If you would like more information on what Cellophane Hoods can do for you, write today. Full details sent WITHOUT OBLIGATION.

Cellophane Hoods Cost Less Per Bottle than any other similar Packaging!

Smith-Lee
HOODS
PACKAGE YOUR MILK FOR GREATER PROFITS

CAP HEADQUARTERS

SMITH-LEE CO., INC. ONEIDA, N. Y.

XUM

IT'S A FACT
FROM A READER
A BEVERAGE
MIXTURE OF MILK WHISKEY AND HONEY IS MADE BY NATIVE PERSIANS — ONLY THE WEALTHY PERSIAN IS SERVED THIS DRINK BEFORE BREAKFAST
CHEESE
DIPPED IN MELTED BUTTER IS A DESSERT TO THE NATIVES OF SWITZERLAND
BUTTER
WITH YOUR FAVORITE PERFUME OR COLOGNE SCENT CAN BE BOUGHT IN
REIMS FRANCE
BEURRE
NOT A DROP OF MILK
WAS SPILT WHEN A TANK TRUCK WITH 3000 GALLONS OF MILK, OVER-TURNED NEAR OIL CITY PENNA.
CRASH!
MILK

the ruling might result in lowering the quality of the state's milk supply.

Skiver said that if the decision stands it may affect the quality of milk in those areas where milk is produced far from the city in which it is sold. He asserted that the only alternative is for cities to increase inspection staffs and permit inspectors to do more traveling. Skiver said the ordinance is designed to limit the territory covered by city inspectors.

Other Restrictions Questioned

The fact that Grand Haven is in Ottawa county, and Grand Rapids in Kent county, adds another question mark in the case, because the logical inference from Judge Smith's decision is that milk may be pasteurized in a county separate from the one in which it is distributed. At least two Michigan counties, Kalamazoo and Jackson, have reciprocal city and county ordinances which, for all practical purposes, permit sale and pasteurization anywhere in the county. The city of Battle Creek has an ordinance covering milk supply and distribution defining the inspection area from which milk can be sold in the city as that from an area within approximately a fifteen mile radius from the city. The ordinance does not limit the distance a pasteurization plant may be located from the city, but the city's health department requires the plant to be in the inspection area. Depending on the outcome of the Grand Haven appeal to the supreme court, a court test looms on the legality of restrictions similar to the one in Battle Creek.

A similar onslaught on a distance restrictive ordinance is pending in Ann Arbor, Mich., where the Page Dairy Co., Toledo, Ohio, has requested a circuit order permitting the firm to sell milk in Ann Arbor. An amendment to the Ann Arbor milk ordinance requires milk to be pasteurized within eight miles of the city limits. Hearings on the case are scheduled for April 20, 1950.

In Grand Rapids, which, like Detroit, has a "five mile law," Dr. E. F. Meyer, chief of the Grand Rapids milk, meat, and food inspection bureau, opined that in view of Judge Smith's decision, the Grand Rapids ordinance "is probably illegal."

Dr. Meyer said the city may be forced to "strike out the five mile limit in our own ordinance," but added that "we can continue to control the quality of milk sold here. It is unlikely any court will deny us the right to regulate the quality of milk sold in Grand Rapids."

Injunction Dissolved

Judge Smith, in a surprise move on Feb. 23, dissolved the temporary injunction that had been in force in Grand Haven against Grocer's Co-operative since June, 1949. It had been assumed the injunction would remain in effect until a decision should be rendered on the city's appeal to the state supreme court. The removal of the restraining order cleared the way for the dairy to apply for a permit to sell milk in Grand Haven; but, because of the involved nature of the case, dairy leaders in the state believe Grocer's Co-operative will not seek a Grand Haven license, pending a supreme court ruling. Grocer's Co-operative officials did not announce intentions.

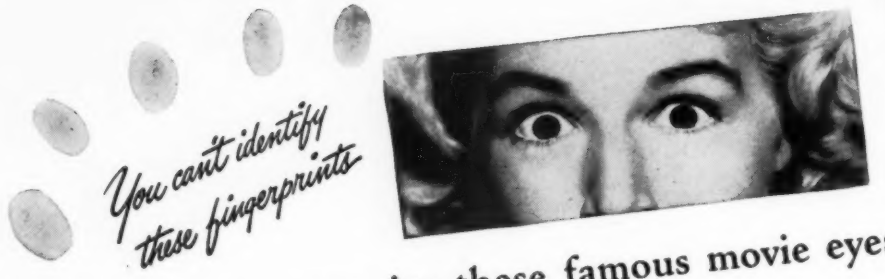
If the supreme court upholds the Grand Haven decision, wholesale revamping of community milk ordinances will be an inevitable result. In addition, new distribution areas will be thrown open to processors all over the state, and the decision would be cited as a precedent in fighting similar restrictive ordinances across the nation.

IT'S A CASE OF QUALITY!

Every case of GREEN SPOT ORANGEADE CONCENTRATE is a business builder for you because GREEN SPOT quality, famous for going on 20 years, makes customers buy again. It's REPEAT SALES that count!

GREEN SPOT INC., Los Angeles 26, Calif.

Sealright Sponsors Nationwide



. . . but if you recognize these famous movie eyes

you may win

THIS GRAND PRIZE AT THE END OF THE CONTEST SERIES

10 VALUABLE PRIZES TO JUNE CONTEST WINNERS
(May 19—June 30)

1. WEIR-MEYER FURNACE (gas or oil-fired) delivered to your town
2. BRUSH SOUNDMIRROR TAPE RECORDER
3. SET OF 4 SEIBERLING SAFETY TIRES
4. PERFECTION RANGE
5. WHITE SEWING MACHINE
6. APEX DISH-A-MATIC SINK
7. APEX AUTOMATIC CLOTHES DRYER
8. APEX FOLD-A-MATIC IRONER
9. APEX WASH-A-MATIC AUTOMATIC WASHER
10. APEX HOME CLEANER

No, you can't identify most fingerprints! Even though they're invisible, they are a sanitation hazard when they come in contact with food. That's why better dairies everywhere protect the pouring surfaces of their bottles with Sealright sterilized hoods. This closure keeps the bottle protected from handling and exposure, from dairy to you. Remember, this sanitary milk protection is available in most communities—it costs you no more!

Ask your milk dealer for official entry blank

Suppliers of Sealright hooded milk have Official Entry Blanks with clues to the star's identity and other contest helps.

* * *

Just follow these simple contest rules

1 Give the name of the movie star whose eyes are shown above. Then, complete this statement in 25 additional words, or less: "I think it is important to protect the pouring top of the milk bottle with a Sealright "Sealon" Milk Bottle Hood because . . ."

2 Mail entries to your dairy or to "Eyedentification" Contest, Post Office Box 00, Chicago 77, Illinois. Your entry must be accompanied by a Sealright Milk Bottle Hood like the one shown above, or a reasonable facsimile

3 Your entry must be postmarked before midnight, June 30, 1950 to be eligible

4 Entries will be judged on accuracy in identifying the movie star, and on the originality and appropriateness of the required statement about protecting the pouring top

5 All entries will be judged by R. L. Polk & Co., Chicago, Illinois. Decisions of the judges will be final. Duplicate prizes will be awarded in case of ties. No entries will be returned. Entries, contents and ideas therein become the property of Sealright Co., Inc.

6 Any resident of continental United States and Hawaii may compete, except employees of Sealright Co., Inc., their advertising agency and their families. Contest is subject to Federal and State regulations.

7 This is one of several Movie Star "Eyedentification" Contests. You may enter the May contest only once, but you may enter the other contests in this series. The next contest will be announced in the July 29, 1950 issue of this magazine

8 The GRAND PRIZE will be awarded to the writer of the winning entry at the conclusion of the series, and before December 15, 1950. Prizes in the June Contest will be awarded on or before August 15, 1950.

Sealright SANITARY MILK BOTTLE CLOSURES

Sealright plants located in FULTON N. Y. • KANSAS CITY, KANSAS • SEALRIGHT PACIFIC, LTD., LOS ANGELES, CALIFORNIA
CANADIAN SEALRIGHT COMPANY, LTD., PETERBOROUGH, ONTARIO, CANADA

This advertisement appears in Collier's Magazine, May 27, 1950

Sealright "SEALON" MILK BOTTLE HOODS

The Sealright Company, Inc., Fulton, N. Y., • Kansas City, Kan. • Sealright Pacific Ltd., Los Angeles

XUM

EYEDENTIFICATION CONTEST for Dairies Using Sealon Hoods!

THE 'EYES' HAVE IT! IN THE NEW CONSUMER CONTEST DESIGNED TO STEP-UP MILK SALES

SEALRIGHT brings to the milk business a new type of advertising promotion which has paid off in increased sales for many kinds of packaged foods—"A Prize Contest!" It should not only stimulate milk sales but also help to make customers more conscious of the importance of "pouring surface protection" for milk bottles.

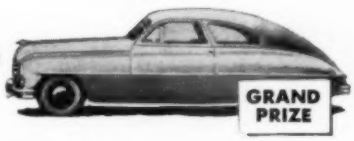
In a series of full page advertisements, starting in the May 27th issue of COLLIER'S, this program should capture the interest of housewives everywhere because it offers valuable prizes for little or no effort and challenges their skill in recognizing the eyes of favorite movie stars.

The *Eye*dentification contest offers consumers more than one chance to win.

In July another set of eyes will be advertised and customers of Sealon-user dairies will have another chance to compete for a second set of prizes.

After the series of contests is complete a Packard Automobile will be awarded to the one submitting the outstanding entry from all contests.

PACKARD 2-DOOR SEDAN



to be awarded at end of contest series

This program is made to order for dairies' local campaigns

Bottle collars which carry photos, clues, rules and official entry blanks are available to dairies for door-to-door delivery with the milk. These may also be used as effective "door openers" for new accounts.

An arresting "dairy case" poster has been designed so that it may be imprinted with the dairy's own trade name and used with a second display card carrying pads of official entry blanks, in grocery stores and super markets. Newspaper mats and radio scripts are also ready for your use.

Here's a program that's going to cause a lot of comment—and sell a lot of milk—make the most of it. Get on the Sealon Band Wagon without delay!

PURCHASE KRAFT PLANT

Lea Foods, Inc., Buys Albert Lea, Minn. Dairy Production Unit

Purchase of the Kraft Foods Company of Wisconsin's Albert Lea, Minn., plant by Lea Foods, Inc., of Stillwater, Minn., has been announced by Forrest A. Nutting, president of Lea Foods.

"We plan to continue to manufacture the same products that have been produced in the plant in the past," Nutting said. "Gilmer Moden, who has been in charge of the plant for Kraft of Wisconsin, becomes general manager in charge of the operation."

Nutting said that he has been associated with the operation of the Albert Lea plant since 1930. "My associates in Lea Foods are completely familiar with the operations and welcome the opportunities that are there."

Commenting on the sale of the Albert Lea plant, J. I. Christopherson, president of the Kraft Foods Company of Wisconsin, stated that it has no effect on other Kraft operations in Minnesota.

"Forrest A. Nutting, Clayton J. Moulton and R. A. Jorgenson, the principal parties interested in Lea Foods, are all men who have been active in the dairy industry for many years," Mr. Christopherson said. "They are well qualified in plant management, manufacture and sale of dairy products. I am sure that their operation of the plant will continue to maintain it as an important community enterprise.

"We have appreciated the splendid cooperation that has been extended to us by suppliers of our raw materials and by the citizens and business men of Albert Lea. We are confident that they will continue to give Lea Foods the same consideration."

●

MILKING MACHINE SANITATION

Klenzade Products Inc., Beloit, Wisconsin, is pleased to offer, without cost, reprints of a paper "The Sanitarian and the Milking Machine" by T. R. Enright, Farm Quality Specialist of Klenzade Products Inc., Beloit, Wisconsin. This article is of direct interest to milk producers and copies may be obtained by milk plant and creamery managers from the Klenzade Company for distribution to their patrons.

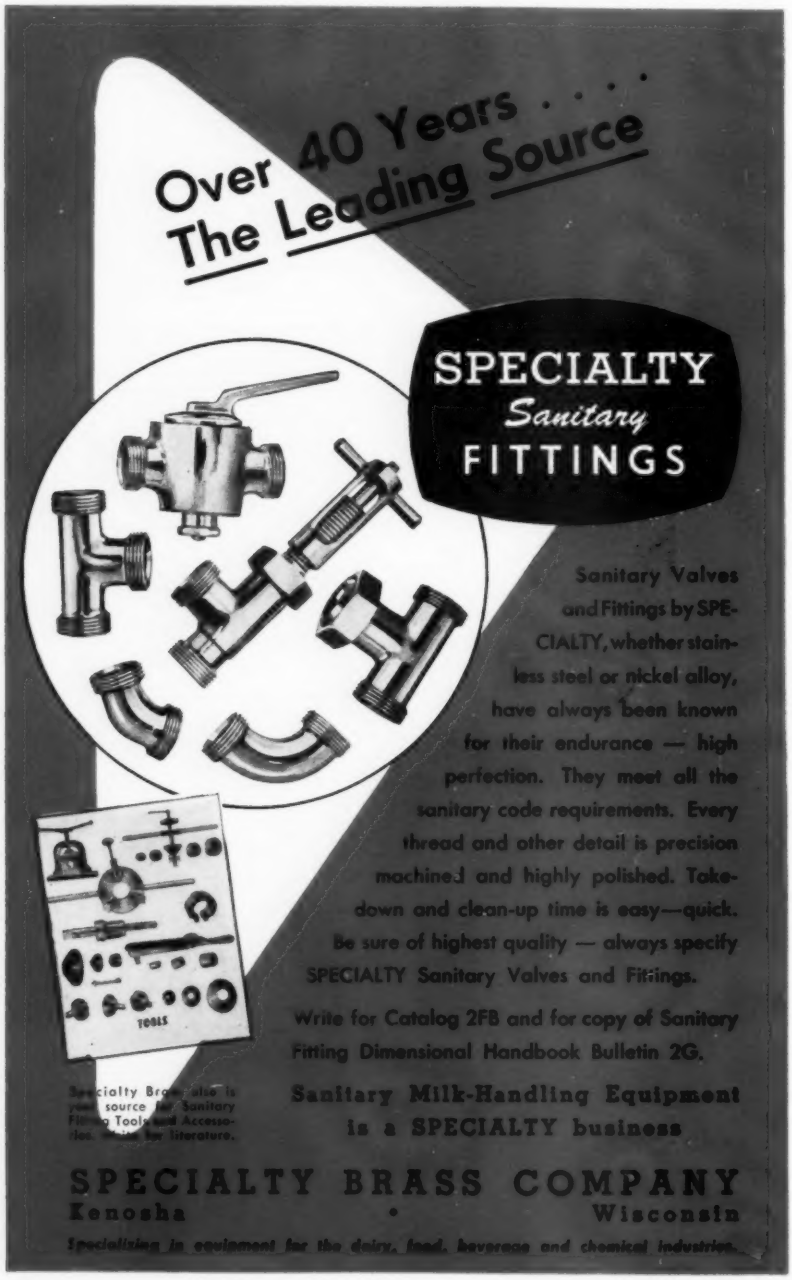
●

EQUIPMENT OFFICIAL DIES

George A. Rowland, Sales Manager of the Buflovak Equipment Division of Blaw-Knox Company, Buffalo, New York, died of a heart attack February 4.

Mr. Rowland's career with the company covers more than 30 years, beginning with the Buffalo Foundry & Machine Co. which became a Division of the Blaw-Knox Company in 1945. His entire career was spent in sales work, beginning as a Sales Correspondent, then Assistant Sales Manager. In the latter post, he traveled extensively in the United States, South America, Cuba and Mexico. Twelve years ago, he was promoted to Sales Manager.

He was a member of the Buffalo Athletic Club, Park Country Club, Sales Executives Club, the American Chemical Society, and the Buffalo Chamber of Commerce. He was a former president of the Foreign Trade Association.

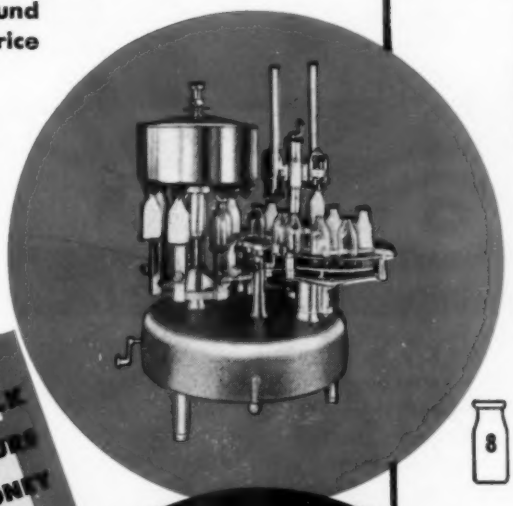

Over 40 Years . . . .
The Leading Source
SPECIALTY
Sanitary
FITTINGS
Sanitary Valves and Fittings by SPECIALTY, whether stainless steel or nickel alloy, have always been known for their endurance — high perfection. They meet all the sanitary code requirements. Every thread and other detail is precision machined and highly polished. Take-down and clean-up time is easy—quick. Be sure of highest quality — always specify SPECIALTY Sanitary Valves and Fittings.
Write for Catalog 2FB and for copy of Sanitary Fitting Dimensional Handbook Bulletin 2G.
Sanitary Milk-Handling Equipment is a SPECIALTY business
TOOLS
SPECIALTY BRASS COMPANY
Kenosha • Wisconsin
Specializing in equipment for the dairy, food, beverage and chemical industries.

SUCCESS STORY:

the milwaukee 72 filler

. . . Cherry-Burrell's new seven-valve filler for medium-size dairies with features found only in fillers selling for twice its low price

Never before has a filler won such wide and prompt acceptance in the dairy industry. Even though we are not always able to ship as fast as the orders come in, medium size plant operators want . . . and are waiting for . . . the "Milwaukee 72" Filler-Capper. Production has been stepped up now so your wait need not be long.



SAVE MILK MAN-HOURS AND MONEY

Here's Why!

The "Milwaukee 72" brings you the same advantages of superior sanitation, smooth, waste-free filling and accurate capping *formerly available in only the larger, more expensive fillers!* Highly efficient and versatile, the "72" can be adapted to a wide variety of plant, product and operating conditions. Available in two basic types—either as a gravity or gravity-vacuum type filler. Look at these big filler features:

- **Uniform Filling** to an exact level . . . no overfilling or dripping on caps. Both gravity and gravity vacuum valves are simple, sanitary, easy to clean.
- **Smooth Infeed** assures trouble-free entry of all standard bottle sizes and shapes. Constant speed—no jerking—no spilling.
- **Accurate Capping** of a wide variety of cover and disc type cap sizes and types.
- **Improved Sanitation.** Open design features rounded, free-draining contours. Stainless steel bowl and valves.
- **"Clean Bowl" Design.** An exclusive feature made possible through the use of Cherry-Burrell's patented diaphragm type valves. The most sanitary filler bowl made!
- **Hand or Conveyor Infeed and Discharge,** right or left-hand feed. Fits any existing plant layout and adaptable to future revisions.

The "Milwaukee 72" Handles ALL of These!

(1) 2-quart rectangular; (2) 2-quart square; (3) 2-quart round; (4) quart round; (5) quart cream-top round; (6) pint round; (7) quart rectangular; (8) half-pint tall round; (9) quart cream-top square; (10) quart square; (11) half-pint squat; (12) quart conical paper; (13) half-pint tall square; (14) pint conical paper; (15) half-pint conical paper; (16) pint square.

SEND FOR BULLETIN

Cherry-Burrell Corporation
Dept. 102, 427 West Randolph Street
Chicago 6, Ill.

Send Bulletin on "Milwaukee 72" Filler.

Name .....

Address .....

City ..... Zone ..... State .....

CHERRY-BURRELL CORPORATION
General Sales and Executive Office:
427 W. Randolph Street, Chicago 6, Ill.
Milk and Food Plant Equipment and Supplies
FACTORIES, WAREHOUSES, BRANCHES, OFFICES OR DISTRIBUTORS AT YOUR SERVICE IN 56 CITIES

trendmaker in a great industry

Let's Talk Accounting

By JIM KLUGER

QUESTION NO. 1 — I would appreciate any information that you can give me on considerations that should be borne in mind in relation to federal marketing orders. We are in the midst of hearings at the present time and would welcome any suggestions that you may have.

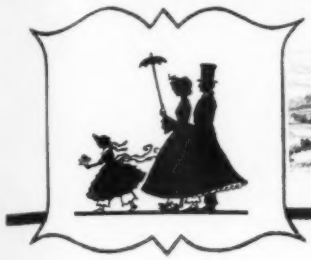
ANSWER NO. 1 — I list below some points which will come up in any hearing and resultant order which must be resolved in the order to avoid later disappointments.

1. Almost to a dead certainty, prices will increase as a result of the order. After all, producers don't ask for an order unless they feel they're not getting enough money under the status quo.
2. Many orders limit, and some almost prohibit, milk from "outside" sources coming into a marketing area, as defined in the order. This is usually done by providing for outside the market source milk being allocated to lower classes, and thus automatically putting inside producers' milk into class I. The result here is to keep market prices for a market artificially high, to the producers' benefit and at the cost of the dealers (or handlers, as most orders term dealers).
3. The accounting methods used in accounting for milk are a very important factor. By using the "butterfat" method of accounting for milk moved through a plant and classified, a very different classification can result than if the "volume" method were used. Some orders use one, the remainder the other method. Which one would be most beneficial to you cannot be known until all other factors and terms of the order, etc. are known.
4. Order tie-ins with health regulations are important. Health regulations are sometimes used in an order (that is, tie-ins to local health regulations) to keep milk outside of a specific market, thus helping to maintain high in-market classification and thus price.
5. It is vitally necessary that an order provide for some "statute of limitations" to prevent a market administrator from opening up a case, possibly years after the dealer thought it closed.
6. The powers granted an administrator are usually very broad. His powers are pretty standard in all orders, and not much can be done about it, but dealers had better be aware of them, both the specific powers and more so the implied powers.
7. The methods of price determination vary considerably, and considerable thought and evidence must be presented at a hearing, especially for class I prices. Class I prices may be artificially pegged at certain levels, they may be based on butter values, they may be the result of a complicated formula using many income and cost, supply and demand factors. Lower class prices are usually based on prevailing month by month market prices for finished products and so usually they fairly reflect supply and demand for lower class products.
8. Location differentials set up in the orders or proposed orders are supposed to compensate for moving milk to a market from country plants, or at least, from outlying plants. Sometimes they do and sometimes they don't. Dealers must be alert to make sure whatever such differentials are incorporated are fair, and reasonable. Also, location and place differentials have a habit of becoming fixed in an order through usage.
9. Butterfat differentials are important. These butterfat differentials are of two kinds usually. First,

(Please turn to Page 67)

Jim Kluger, specialist in dairy accounting, conducts his exclusive column in the "American Milk Review" each month. If you have an accounting problem or simply an accounting question write to Mr. Kluger at Kapleau, Kluger & Company, 1414 South Penn Square, Philadelphia, Pa. He'll do his best to give you the straight dope.

ESTABLISHED 1873 • NEARLY EIGHTY YEARS OF HONEST EQUIPMENT



CATTARAUGUS

Nestled high in the lovely foothills of the Alleghenies, the contented, thrifty PURITY workers thrive and prosper, many of them living in the same block with the clean, quiet factory. Home-owners and home lovers — three generations often ply their skill side by side.

The PURITY Standard Weigh Can in position over inlet cover of Receiving Vat. Any dumping position desired.

Smart AS-A-WHIP-

EVERY day, rain or shine, the rush hour strikes in the morning.

Processions of farmers' trucks and wagons—and rows of cans on the conveyors — each to be sampled, dumped and weighed correctly—all "while you hesitate."

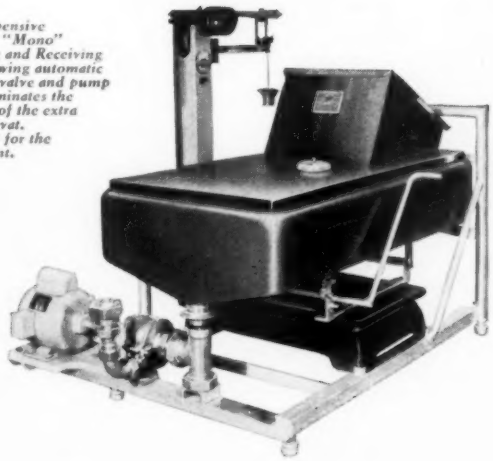
And it's just too bad for you if you don't have the right equipment.

Receiving room work is just like any other—"done right it brings honey; done wrong it brings stings." Why worry along with outmoded, makeshift tools, when new PURITY receiving room equipment is so exactly what you need?

The PURITY Receiving Room Equipment shown on this page is built all of stainless steel to plans approved by health boards. All seams electrically welded, ground and polished to a mirror finish; and rounded corners make for easy cleaning. We fabricate these and other pieces, especially to your requirements. For a very few dollars more, you may have exactly what you need—a perfect fit. And **a perfect fit means dollars to you.**

Modernizing does not "cost" you money—it **pays** you money. New PURITY equipment will write off its own cost in no time at all. Fewer mistakes, fewer headaches, less labor, satisfied patrons, more business — **you know the story. Better investigate.**

The inexpensive PURITY "Mono" Weighing and Receiving Unit, showing automatic dumping valve and pump which eliminates the necessity of the extra receiving vat. Just right for the small plant.



PURITY MANUFACTURING COMPANY

OAKES & BURGER CO., INC., *Sole Distributors*

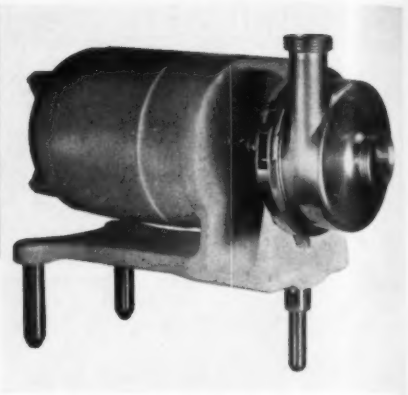
CATTARAUGUS, NEW YORK, U. S. A.

2

PURITY

MILK HANDLING MACHINERY AND EQUIPMENT

PUMPING MILK AND CREAM



Photograph courtesy Tri-Clover Machine Co.

By E. L. FOUTS

Exclusive feature AMR

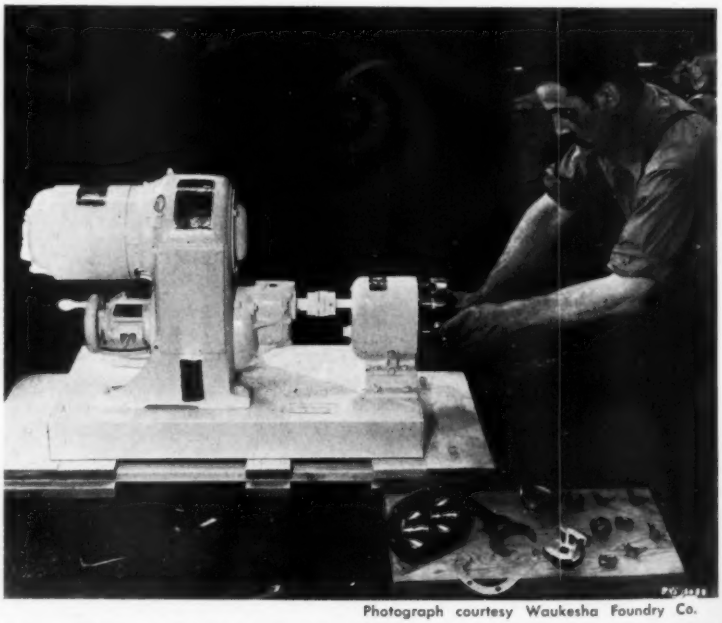
Within recent years several types of milk level control apparatus have been introduced into the dairy business. These are made to fit into vats, tanks, cooler troughs and various other pieces of equipment for the specific purpose of maintaining certain product levels. In most cases these controls are attached to and operate a pump motor. In some instances these controls may be arranged to cut off a pump when a vat or tank has been completely filled; in other cases the installation may include the high and low level control which starts the pump when the milk recedes to a certain level in a vat or tank and stops it again when the higher level is reached.

These automatic controls are a great convenience to the operator and provide a very definite economy from the standpoint of almost complete prevention of product losses due to overflowing tanks, cooler troughs, and other pieces of equipment.

Unless some method is provided to control automatically the operation of pumps, overflow and losses of product are inevitable at times in even the most efficiently managed operation. After many years of milk plant management and operation both with and without automatic milk level control apparatus on various pieces of equipment, the writer is of the firm belief that such equipment pays for itself in short time by its ability to minimize the loss of product.

In recent years one story milk plants have been gaining in popularity as contrasted to the two or more story plants which were quite popular some years ago. By the older plan milk was received on the first floor and elevated by pumps to the second floor where it was pasteurized and then either pumped over the cooler on the second floor to flow by gravity to the bottling equipment on the first floor, or permitted to flow directly to a surface cooler on the lower level and then by gravity on into the bottle filling machine. The more recent plan accomplishes all of these operations on one floor which, according to many who have given considerable thought to this plan, has numerous advantages. The one floor plan of necessity requires the use of more pumping operations to conduct the milk, since the upper level does not so easily permit the gravity flow system. Also, in this same plan many milk plants are doing away with the elevated cooler which permitted the flow of milk by gravity into the bottle filler.

These changes have necessitated the pumping of milk from a trough or accumulator at the bottom of the cooler into the bottle filler. The use of milk level control apparatus is very essential here to govern the flow of milk to the cooler by stopping and



Photograph courtesy Waukesha Foundry Co.

To be satisfactory for service in the dairy industry a pump must be completely sanitary. Manufacturers have, therefore, designed their pumps with an eye to easy dismantling.

AMERICAN STORES COMPANY . . . BEATRICE FOODS COMPANY . . . CUDAHY PACKING COMPANY

DILBERT BROS. . . . . FAIRMONT FOODS COMPANY . . . THE KROGER COMPANY

LAND O' LAKES CREAMERIES . . . JEWEL FOOD STORES . . . H. C. BOHACK COMPANY, INC.

BORDEN COMPANY

ARMOUR & COMPANY

GRISTEDE BROS.

SAFEWAY STORES, INC.

WILSON & CO

SWIFT & COMPANY

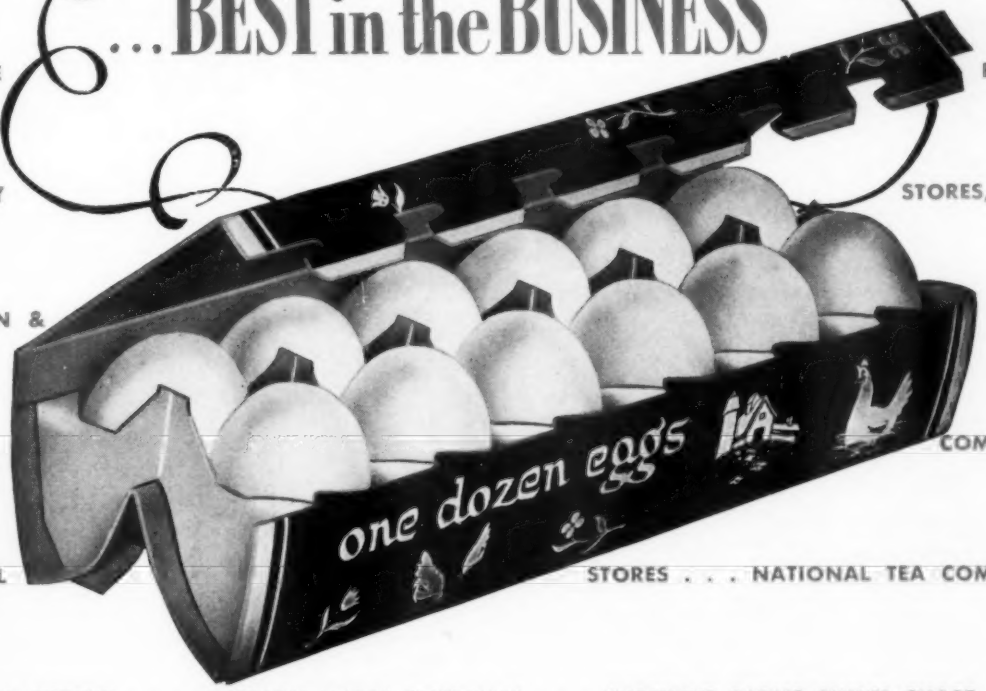
COLONIAL STORES . . . NATIONAL TEA COMPANY

H. G. HILL STORES . . . BOWMAN DAIRY COMPANY . . . CHESTNUT FARMS-CHEVY CHASE DAIRY

SELF-LOCKING EGG CUSHION CARTONS

Used by the

. . . BEST in the BUSINESS



SELF-LOCKING CARTON CO. . . . . .

Division of

Shellmar Products Corporation

535 E. Illinois Street, Chicago 11, Illinois

Telephone: SUPerior 3886

★ *Pacemaker in Egg Packaging* ★

starting the pump as the level of milk in the trough at the bottom of the cooler requires it.

The necessity of pumping milk, then, from this cooler trough, which is below the level of the supply tank on the milk bottler, means that some type of level control should be put on the milk supply tank on the bottler to keep it from overflowing. A float valve type control has been used with complete satisfaction with the gravity flow principle using an elevated cooler. It is not satisfactory, however, in installations where the milk is pumped into the supply tank of the bottler. It is true that the float control will cut off the flow of milk, but it does not cut off the pump, therefore, when the float valve is closed and the pump is still running, the milk is being subjected to very definite danger of churning which in all probability will result in some degree of cream plug on the bottled product. The electric level control eliminates this difficulty by maintaining the correct level of milk in the bottler by means of stopping and starting the pump as the milk is required to meet the needs of the bottling operation.

The milk level controls are very dependable and last for many years of good service. The parts which are in contact with the milk are entirely sanitary and are very simple to clean and sterilize.

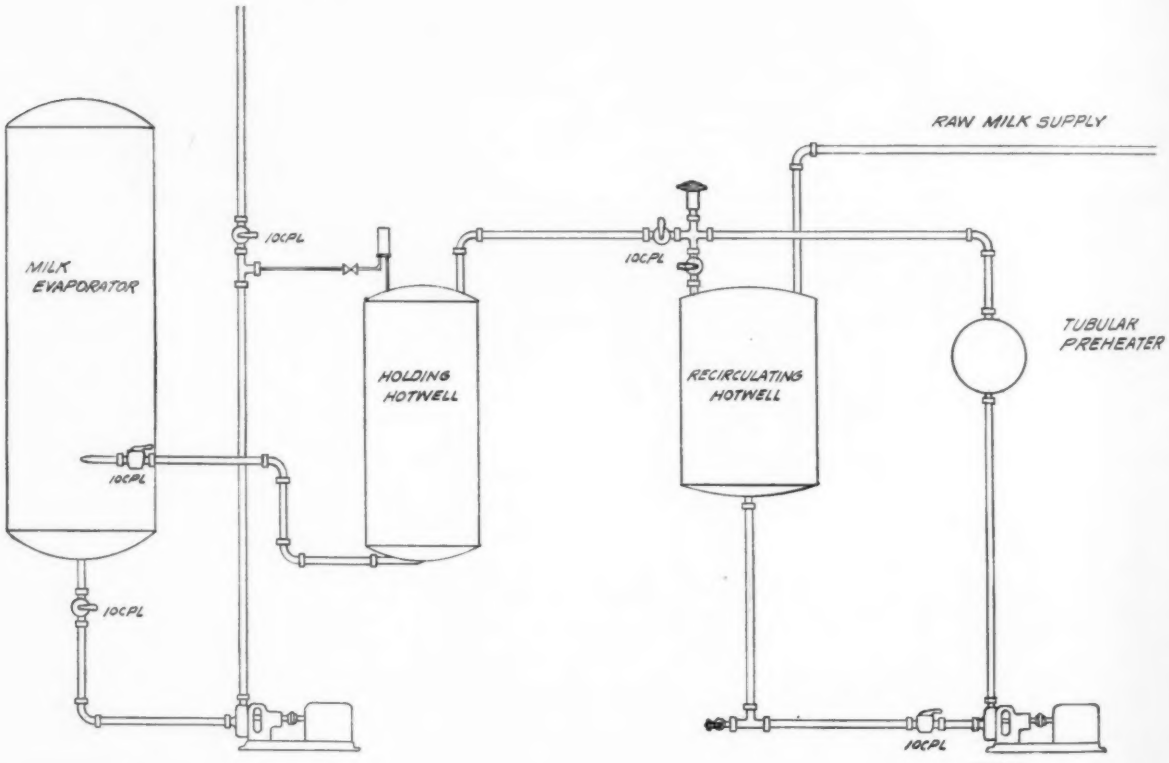
The above mentioned milk level control for the supply tank of the bottling machine is not available on any of the milk bottling equipment as it comes from the factory. The one described was made and mounted on the cover of the milk supply tank of the bottler at very small expense.

Multiple Pumping of Milk

With the change from multiple story milk plants to one floor plants it has become necessary in some instances to utilize pumps to a greater extent than was necessary as in some of the setups previously used. It has been the experience of the writer that one level installations, in which it may be necessary to pump milk as many as three times, are entirely satisfactory. It has been found that if properly operated this system is capable of producing bottled milk free of defects as related to any abuse that might be given the milk due to excessive pumping. It has long been known that milk or cream suffers a minimum of injury caused by pumping when it is either hot or cold. It is during the time that milk or cream is at such a temperature that the butterfat is partially liquid and partially solidified that the danger of churning is accentuated.

This means, of course, that it is quite safe to pump milk just after it has been milked, at which time the fat is in a completely liquid condition. It is also safe to pump milk after it has stood for a considerable period of time in the cold room at temperatures in the neighborhood of 40°F., at which time the fat is largely in the solid form. The danger point comes when milk is being pumped at a temperature somewhere within the range of 100° to 125°F. If the milk is cold and has just been warmed to a temperature within the range indicated, this means that theoretically the fat should all be in a liquid state, but actually it has

(Please turn to Page 74)



Photograph courtesy Tri-Clover Machine Co.

Proper application of sanitary centrifugal pumps of dairy operation is shown in this drawing. Dr. Fouts points out that pumping milk as many as three times in a one level installation is completely satisfactory. Milk should be either hot or cold when pumped.

With Pikes Peak as a background, the IXL Dairy stands out dramatically—an ultra-modern, all-paper plant. IXL, under the management of True Adams, is famous throughout Colorado for quality of its products and the completeness of its service.

"Good Morning MRS. AMERICA" in COLORADO SPRINGS

"Our Pure-Pak operation," states True Adams, pioneer Colorado dairyman and manager of IXL Dairy, "efficiently meets our exacting requirements. We serve all of Eastern and Southern Colorado, using 17 trucks to handle 2000 retail and 300 wholesale stops, on a E.O.D. basis. IXL was the first all-paper dairy in Colorado, and our 'Junior', installed for that purpose in 1946, still runs practically as good as new."

Attractive Mrs. Art Mosely and her little daughter, Terry and friend Carol, of Colorado Springs find IXL products well worth discussing with George A. Polster, one of IXL Dairy's Route-Salesmen.

IXL packages both Grade A Homogenized - Pasteurized, and Pasteurized Milk; Standard Cream and Whipping Cream; "Half and Half"; Buttermilk; Chocolate Drink; and Orange Drink in Pure-Pak single-service containers—note the attractive carton design emphasizing the dairy's well known trade-mark.

Guaranteed by Good Housekeeping

Pure-Pak Containers are guaranteed by Good Housekeeping

MAIL THIS COUPON

Pure-Pak Division—Ex-Cell-O Corporation . . . EST. 1919 . . . Detroit 32

PLEASE SEND COMPLETE INFORMATION ON:

☐ Milk-Packaging Machine . . . Model_____ ☐ Electro-Pure Pasteurizer . . . . . Model_____

☐ Semi-Auto. Ice Cream Pkg. Machine _____ ☐ Fully-Auto. Ice Cream Pkg. Mach. . . . Model_____

NAME _____

CITY _____ ZONE _____ STATE _____ AMR

Your bottles "*take it*" better

DRINK MORE
Milk
NATURE'S most nearly PERFECT FOOD
PROTECT
THE CHILDREN
SEALED
HANDI-SQUARE
Adopt Handi-Squares and increase your storage and delivery capacity up to 50% without adding a building, or buying a truck. Your grocers can handle up to 50% more milk without adding extra space. And your home customers like Handi-Squares because they save so much refrigerator space and are so easily handled.
ACL
Make each bottle a "talking salesman" for your dairy with colorful ACL designs. Use this advertising on your bottles to promote your dairy, other products or community health and safety programs. Our artists are ready to help you express your ideas in attractive ACL on your bottles.
TUMBLERS FOR DAIRY PRODUCTS
TALL ROUND
TALL SQUARE
HANDI-ROUND
HANDI-SQUARE

because of what happens here

RAW MATERIAL CONTROL . . . stronger bottles for you begin with our scientific selection of the best basic ingredients, carefully chosen at their source.

WEIGHING AND MIXING CONTROL . . . modern, automatic machines accurately weigh and mix the basic materials that make up the glass batch for Duraglas bottles.

FORMING AND ANNEALING CONTROL ... advanced bottle-forming machines measure a precise "gob" of hot glass, mold it and anneal it to rigid time and temperature standards. Result? Uniform bottles of uniform strength!

IMPACT RESISTANCE CONTROL . . . at regular intervals bottles are pulled from the production line, bumped and banged in actual-use manner to test impact resistance.

TEMPERATURE CHANGE CONTROL . . . hot and cold-water plunges are made at regular intervals to test thermal shock resistance.

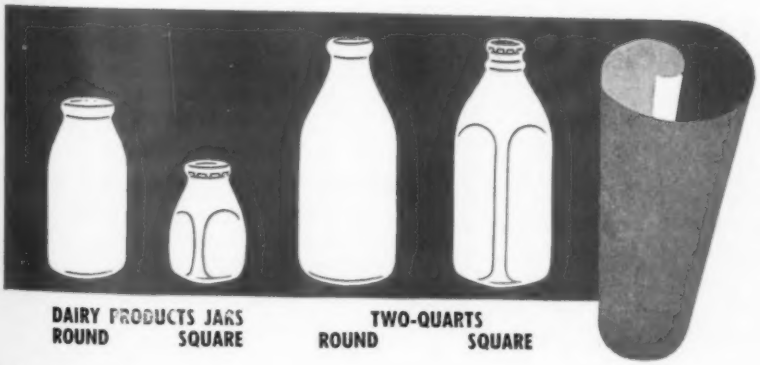
THESE AND OTHER TESTS KEEP DURAGLAS BOTTLES AT TOP "TAKE IT" LEVELS. Your operation benefits from the down-to-earth economy that only sky-high quality in returnable bottles provides. From half-pints to gallon jugs, it pays you to buy Duraglas bottles.

DEPENDABLE SOURCE OF SUPPLY. A fully staffed branch office is near you. Contact them for everything from bottles to cases.

TESTING BOTTLE STRENGTH *at the Duraglas Center—bottles are struck with measured violence on the "Pendulum Impacter."*

Duraglas
TRADE MARK REG. U.S. PAT. OFF.

Dairy Containers



DAIRY PRODUCTS JARS ROUND SQUARE

TWO-QUARTS ROUND SQUARE

OWENS-ILLINOIS GLASS COMPANY
TOLEDO 1, OHIO
BRANCHES IN PRINCIPAL CITIES

INDUSTRY PROBLEMS

Dr. Robert F. Holland and Dr. James C. White, both of the Department of Dairy Industry at Cornell University, conduct their question and answer column each month in the "Review". Questions should be addressed to either Dr. White or Dr. Holland, Department of Dairy Industry, Stocking Hall, Cornell University, Ithaca, N. Y.

●

Milk Coagulation in Cooking

QUESTION — We have had a few complaints that our milk curdles when used for cooking, especially our homogenized milk. Our product is of good quality and we have no trouble with sour milk. Can you tell us what causes this and what we can do about it?

J. M. C., Pennsylvania

ANSWER – It is not uncommon to have milk coagulate in the cooking of foods in which milk is an important ingredient. The housewife usually blames the milk and complaints result. The dealer must handle these with tact.

There are a number of causes of curdling and some of these are: temperature and length of time of heating, rate of heating, acidity, and the composition of the milk salts.

The higher the temperature and the longer the time of heating, the more likely milk is to curdle. Fresh, sweet milk alone will curdle when held at the boiling point for 5-8 hours. This time may be shortened considerably when things are added to the milk.

If milk is to be mixed with things that increase the danger of curdling, the rate of heating becomes important. There is less danger of coagulation if milk is heated slowly. This slow heating apparently imparts a stabilizing effect resembling the forewarming in the manufacture of evaporated milk.

The effect of acidity needs little explanation. In general, the higher the acidity, the lower is the temperature at which coagulation takes place. The materials with which the milk is mixed must be considered as well as the milk itself. These materials, such as flour, may vary widely in composition from batch to batch, sometimes producing a curdled product and sometimes not. The consumer will generally consider that the milk is at fault in case a curd is formed and the dealer is in trouble.

The normal salts of milk as well as those added in cooking play an important part in heat coagulation. Heavily salted foods, such as escalloped potatoes, will generally show curd formation. The addition of small amounts of disodium phosphate or sodium citrate will often assist in preventing excessive heat coagulation. Bicarbonate of soda is sometimes added in making tomato soup.

Homogenization of milk tends to decrease its heat stability and has always given trouble. The same corrective measures that apply to normal milk apply to homogenized milk but are generally less effective.

To conclude, the dealer can often give the customer little more than an explanation for the troubles she is experiencing, but a sympathetic discussion of the problem will go farther toward cementing good-will than simply a denial that the milk is at fault.

Types of Bacteria and Their Sources

QUESTION — I am having good results with the thermoduric counts on producers' milk. I would like to know more about the types found and what they pertain to.

Most of our bacteria which survive are fine bacteria of the Cocci family. A few tubes have spreading colonies which I am sure is not contamination. I know thermoduric organisms are spore and nonspore-formers. Have you any information whether the spreading comes from milk cans, dirty utensils, or milking machines?

B. W., New York

ANSWER – It is common practice in milk plants where high thermoduric counts are experienced to make a diagnosis of the sources of the troublesome organisms. These sources have been placed in three general categories: dirty utensils, mastitis, and poor cooling. In addition to these, the dirty utensil category has been broken down to various specific things, such as: dirty milking machines, dirty pipe lines, dirty milk hoses, etc. We would question whether most of these classifications have any validity.

It is to be expected that most of the organisms that you find in making a thermoduric count will be cocci. Many staphylococci are not killed by pasteurization and we expect some of the

(Please turn to Page 85)

XUM

How to get BETTER CLEANING at lower cost *every time!*

CALL YOUR DIVERSEY D-MAN TODAY
He's *prepared* to give you expert advice on all your sanitation and insect control operations.

THE DIVERSEY CORPORATION
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THREE REALLY NEW GENERAL CLEANERS GIVE YOU "DYNAMIC CLEANING POWER"!

Yes, here's the revolutionary new kind of cleaning performance you hoped would come . . . so radically improved . . . so vastly superior that you must see it to believe it! And, just what makes these new Diversey cleaners so outstanding? We call it "Dynamic Cleaning Power"! Only Diversey has it! It's a revolutionary new approach to the formulation of industrial type cleaners!

Investigate new Diversey D-Luxe, Divoluxe and Diflex today. Let your Diversey D-Man show you the amazing difference "Dynamic Cleaning Power" makes . . . see the difference on *your own* equipment! No obligation! Call or write now!

Special Equipment for

Effective and Economical Cleaning

By JOHN R. PERRY
National Dairy Products Company, Inc.

Exclusive feature AMR

The Dairy Industry distributes products which are so essential that it is important they be available to everyone. Because of this it does everything possible both to have them of excellent quality and to make them available at reasonable prices. The consummation of these two objectives requires expensive equipment and buildings, constructive economy and efficiency in plant operation, as well as specialized knowledge and skillful management. In its effort to continually improve the quality of dairy products and, nevertheless, to continue to sell them at reasonable prices, the Dairy Industry engages in a never-ending effort to uncover new procedures which enhance quality and installs new equipment which reduces plant costs.

The cleaning operation is one of the two most important operations in the dairy plant and significantly affects both the quality of the product and plant costs. Although good cleaning has been accomplished by the Dairy Industry, it has generally been obtained by dint of hard and often distasteful labor and at great expense. Several years ago, at the instance of Sealtest, the writer made a searching study of the cleaning operation. The study disclosed that for the most part only primitive fundamental facilities and crude cleaning equipment, such as the pail, the nondescript brush and the wasteful free-running hose, were generally used. This study showed that if plants had proper fundamental facilities, such as a satisfactory heated-water system, adequate water pressure, proper cleaning compounds, as well as cleaning equipment adapted for the cleaning operation, not only could effective cleaning be accomplished but substantial savings could be made in time, water, fuel, cleaning supplies and effort. This study also showed that if proper cleaning equipment were used, much of the costly abuse of processing equipment and plant, as well as high maintenance costs, could be eliminated.

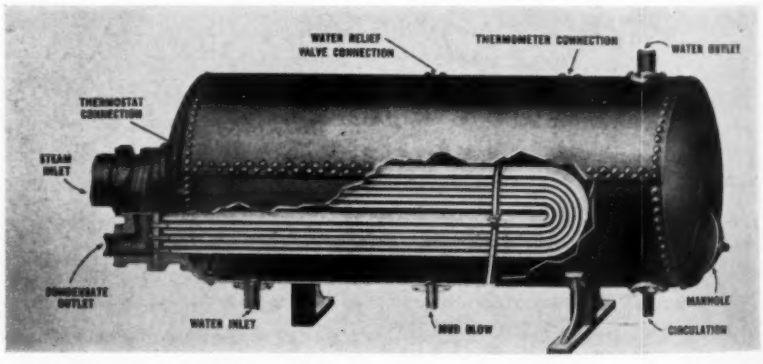
To make possible an effective, efficient and economical cleaning operation, fundamental facilities were determined and a number of special devices specifically adapted for cleaning in dairy and ice cream plants were designed which have been designated as New Cleaning Aids. These fundamental facilities and special devices have also been found very helpful in many kinds of food plants.

Fundamental Facilities Needed

Rinse water at the proper temperature is very important in the cleaning operation and yet many plants do not have the proper facilities to supply such rinse water. Experience has shown that rinse water with a temperature of 115°F. is desirable in the cleaning operation. This temperature is high enough to move butterfat satisfactorily, will not "fry on" the coaguable portions of milk, and can be tolerated by the hands.

In many plants rinse water is obtained by mixing steam and cold water just before it enters the hoses. This method is eminently unsatisfactory and seldom supplies rinse water of proper temperature. Moreover, it is virtually impossible to "temper" water properly in this way and there is always the possibility of steam or too hot water coming out of the hose so that the operator stands a chance of being severely burned.

To supply rinse water at the proper temperature, first of all, a proper Hot Water Generator is needed. This Hot Water Generator should be equipped with a reliable and sensitive thermostatic control. A Hot Water Generator



Cutaway illustration of a reservoir type of hot water generator showing coil through which steam indirectly raises the temperature of the water in the reservoir.

XUM

of the reservoir type using an indirect heating coil has been found to give good results.

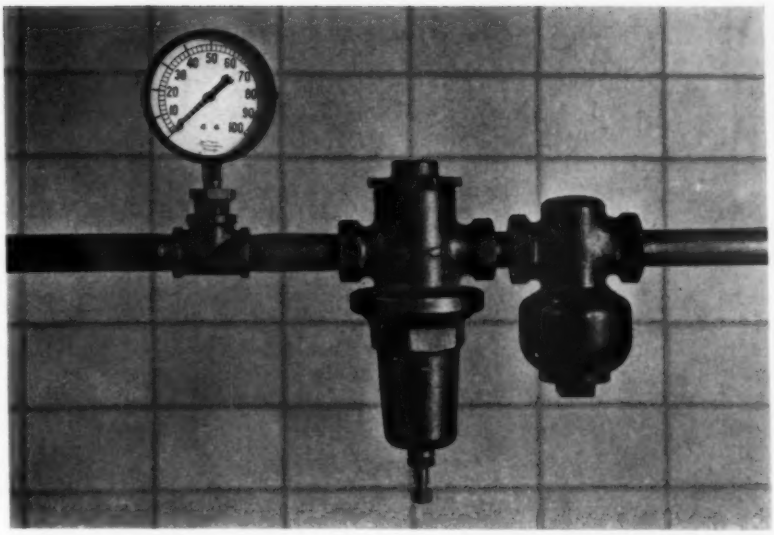
Where practical, the Hot Water Generator should be located near to the boilers so that the operating engineer may have ready access to it and also so that short steam and condensate lines can be used to minimize the high radiation loss which results from carrying steam and high temperature water in pipe lines.

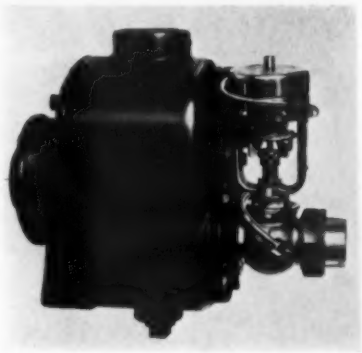
In some cases it is practical to have the Hot Water Generator deliver water at such a temperature that when it leaves the hoses it will have a temperature of 115°F. However, even where this is practical, it is sometimes desired to use water with various temperatures and yet not have more than one Hot Water Generator. It is not only possible but practical to do this as will be explained farther on.

Where it is desired to obtain water with differing temperatures from the same Hot Water Generator, or where water with a temperature of 115°F. must be used at a distance from the Hot Water Generator, it is desirable to install one or more Tempering Valves. The Tempering Valve blends hot and cold water and delivers water with a predetermined temperature Where a Tempering Valve is used, it is possible, for example, to have a Hot Water Generator deliver water with a temperature of 160°F. The Tempering Valve will blend this with cold water so that it may deliver water with a temperature of 115°F. The water with a temperature of 160°F. may be carried to places where needed by cutting in with another pipe on the line leading from the Hot Water Generator to the Tempering Valve.

Although it is desirable to have the Hot Water Generator close to the boilers, it is preferable to have the Tempering Valve close to the part of the plant where the Tempered Water will be used in order to minimize temperature lag. In the case of a small plant, one Tempering Valve may be all that is needed, whereas, in the case of a large plant, several Tempering Valves may be found to be necessary.

If water with more than two temperatures is desired from the same Hot Water Generator, it can be obtained by using Tempering Valves which deliver water at various temperatures.





Pressure Regulator, Strainer and Pressure Gauge are shown above. As water passes through this assembly its pressure is reduced to the pressure desired. Tempering valve, shown at right, automatically mixes hot and cold water. Hot water from generator enters through inlet at right, tempered water leaves through outlet at top. Thermostatic control is located just above inlet.

Hence, for example, it is possible to have water delivered direct from the Hot Water Generator with a temperature of 160°F., through one Tempering Valve with a temperature of 115°F. and through a second Tempering Valve with a temperature of 140°F.

Since it is desirable that only water with a correct temperature be used for rinsing, it is practical and desirable to run only one water supply line, carrying water with a temperature of 115°F., to each Water Station. Doing this puts the control of the temperature of the rinse water in the hands of management, saves time otherwise expended in tempering, reduces the amount of pipe needed and eliminates any danger of operators being burned by the rinse water. This system has now been in use for several years in a number of plants and has worked out satisfactorily.

In most existing plants two pipe lines run to each Water Station. One of these lines can be used to carry the Tempered Water and the other can be rendered inactive or removed.

While a sufficiency of rinse water at adequate pressure is imperative, in a considerable number of plants there is not enough water and the pressure is too low at some or all of the Water Stations. In others there is altogether too much water at too high a pressure at some or all of the Water Stations. These conditions make satisfactory rinsing difficult, in some cases requiring unnecessary time and effort and in others causing a great waste of water and fuel.

To insure good rinsing, there should be a sufficient quantity of water at the proper pressure at each Water Station. This means that the pressure of the water where it enters the plant should be sufficiently great and that the supply lines running through the plant should be large enough. It also means that there preferably should be a Pressure Regulating Valve at each

(Please turn to Page 76)

Dacro P-38 gives you

. . . FASTER BOTTLING

. . . MORE CASES PER HOUR

. . . LESS COST PER CASE

Single capping, simple mechanism and preformed caps make Dacro P-38 operation fast and trouble-free. There are few stops and no long delays. But savings in time do not end at the capper. With faster operation on the bottling line, attendant operations go faster, too. Time is saved in pasteurizing, bottle washing, cold room, loading, etc. All these savings in time add up to a big reduction in total operating cost.

an Extra Profit bottle of milk you sell"

If you are not using the Dacro P-38 Cap, extra profits are slipping through your fingers. We know this to be a fact because we have demonstrated it in dairy after dairy.

Accurate stop-watch performance studies have been made in dairies both before and after the installation of the Dacro P-38 Cap. In every one the results have been the same ... faster production ... practically no delays ... more cases per hour ... and lower cost per case. In fact, the savings are so amazing that it is hard to believe them until you see the actual figures.

Why not let a Dacro Representative show you some of these performance studies? If you wish, he will also arrange for a study of your own operation. Then you can see for yourself how much more profit you might be making with Dacro P-38.

A phone call, wire or letter will bring a Dacro Representative to your office at a time which suits your convenience.

CROWN CORK & SEAL COMPANY *Dacro Division* **BALTIMORE 3, MD.**

Preferred by Housewives!
Aluminum DACRO Cap
Everybody likes the Dacro Aluminum Cap. It fits the bottle top snugly . . . yet it is so easy to take off. And it snaps back on just as easily to make a really dependable re-seal.
MILK
Save on Cap Costs, too!
Because of its smaller size, the Dacro P-38 Cap takes less material to make and sells at a lower price. It saves money on caps every day you operate.

XUM

They Need It In Their Business

By NORMAN MYRICK

WONDER WHAT IT FEELS like to pick out a good one and watch it rise and rise and rise up into oblivion; watch the fielders go back to the fence in a brave, futile effort to get it. Wonder what it feels like to put your back into a fast one when the bases are loaded, watch it nick the corner and hear the umpire bark that wonderful word.

Wonder if the Red Sox will really do it this year or if anybody will ever win thirty again. Wonder if Old Man Trouble will dog the Yankees this year and how many more springs will find gallant Luke Appling out there in Comisky Park.

Wondered, too, what ball players think of milk. Wondered for a long time and finally decided to ask one of them. We asked Johnny Groth, Detroit's great rookie of '49. We asked him because he's young Mr. Baseball, strong and competent and fine. We asked him because he hit .293 his first year in the big time, because he drove in 73 runs and hit for the grand circuit eleven times. We asked him and this is what he said.

JOHNNY GROTH

"I signed with Detroit in 1946. My first year I played with Williamsport in the class A Eastern League, hit .319, 10 home runs and drove in 78 runs.

"I played for Buffalo of the International League in 1948, hit .340, drove in 97 runs and hit 30 home runs. Last year for Detroit I hit .293, drove in 73 runs and hit 11 home runs.

"I enjoy milk and find it very nourishing. With every meal I drink at least two glasses of milk and for extra energy I always have a bottle of milk before game time."

Makes you feel good, doesn't it, to see the champion among champions. Makes you feel good to know that the things that are good will endure, that quality will find its way to the top.

Three big leaguers and they're all good. Mel Parnell, Boston's superb twenty-five game winner, and Ken Raffensberger, top thrower for the Cincinnati Reds look as though they had found the magic elixer in that bottle of milk. Sox will count heavily on Parnell in their penant drive.

TO SERVE YOU BETTER . . .

finest Milk Bottles by THATCHER GLASS

Year after year, ever since 1884 when Dr. Hervey D. Thatcher invented the first glass milk bottle, the name Thatcher has signified the very best glass milk bottles. A continuous parade of improvements in equipment, manufacturing methods, and laboratory tests has been developed by Thatcher to produce stronger and better glass milk bottles.

Today, Thatcher has over $15,000,000 worth of improved glass-making facilities to serve the dairy industry . . . the world's most modern glass furnaces . . . the most efficient automatic bottle making machines . . . finest precision temperature controls . . . latest scientific testing equipment—all devoted to producing more and better glass milk bottles at lowest cost. That is why Thatcher milk bottles are tougher, more uniform, better designed, and give more round trips.

Whatever type milk bottle is best for your plant, Thatcher engineers and facilities are at your service—backed by more than 65 years of complete experience in milk bottle manufacturing. The finest and most economical glass containers for your milk plant are made by Thatcher.

THATCHER GLASS

MANUFACTURING COMPANY, INC.

Elmira, N. Y.

EDITORIALLY SPEAKING . .

JAMESTOWN PAPERS PLEASE COPY

About the best advice we can pass on to the people of Jamestown, New York as they consider the question of a municipal milk plant is the story of two government hospitals in Boston.

The army is closing down a thousand bed hospital in Waltham, a town just outside of the city. This is a modern hospital built less than a decade ago. It is a beautiful building. The army is closing it down because they do not need it. On the other side of the city, contractors are hard at work laying the foundations for a new multi-million dollar hospital for the Veterans Administration.

A municipal milk plant, so they say, will be able to sell milk for 2 cents less than private concerns.

●

Let the Chips Fall

LAST MONTH we wrote urging dairymen to stand up and be counted. This month we have had the privilege of presenting in our Portrait Of A Dairyman, one who does.

Ariel C. Merrill, Vice-President and General Manager of Clover Leaf Dairy in Salt Lake City has had a distinguished career in the dairy industry. As a teacher at Utah's State agricultural college and as the chief executive of a solid milk business he has a unique opportunity to combine the theoretical and the practical. His record bespeaks the success of this synthesis.

The characteristic of Mr. Merrill's that we admire most, however, is his willingness to let people know where he stands and why. In an era when the high powered press representative and the public relations expert are the guiding lights in what to say and when to say it, one gets a thrill out of reading "I am as diametrically and completely opposed to governmental regulation of the milk business as I am to governmental regulation of free speech, the press, or a man's right to worship as he sees fit." And again, "It seems to me that a good way to reduce taxes would be to discontinue demanding additional services from the government. A good place to start is in our own back yard."

The dairy industry and the nation can use all of this kind of independent thinking that can be found. If we may take Mr. Merrill's observation on quality control and apply it to society in general, "Most of us may not achieve the desired end, but the way to the end is clear." As long as there are men of Mr. Merrill's caliber who are willing to stand up and be counted we cannot rule out the possibility of achieving the end desired.

●

The ADA Moves Ahead

THE ACTION of the delegates to the annual convention of the American Dairy Association have done an extremely commendable and stirring thing in voting to step up their selling program.

Repudiating government help and price supports as the way out of the dilemma caused by a seven billion pound surplus, the men who man the milk pails have put their own shoulders to the wheel. This is more like it.

People are pretty delicately balanced creations where the mind is concerned. The line between the apparently easy way and the possibly hard way is never very distinct. A federal price support program that automatically takes care of the surplus is an attractive proposition until the price is added up. Self taxation and the energetic application of ones own time and effort are less inviting. It is only when the true cost in tangible and intangible possessions is readily demonstrated that the hard way becomes, obviously, the best way.

But now that dairymen have faced up to the realities of the situation, the hard way is not as difficult as it seemed at first glance. Seven billion pounds of surplus milk is a great deal of milk taken all at once. If, however, it is broken down into workable units it does not appear at all terrifying – An extra pint of milk per family per month, a quarter of a pound of butter, a pint of ice cream. As Colonel Castle said, these quotas are neither difficult nor impossible. We believe that they can be achieved.

●

Price Wars and Disasters

IN HIS ADDRESS at the convention of New England milk dealers held last month in Boston, T. Kline Hamilton, President of the Milk Industry Foundation put his finger on a sore spot. Mr. Hamilton said, among other things, that the industry needed a sound marketing program. A few minutes after Mr. Hamilton's speech, Edward O. Mather, Dellwood Dairies of Yonkers, New York gave eloquent testimony to the urgency of Mr. Hamilton's contention.

The great New York market, largest in the world, is demoralized. It is demoralized due to a combination of political attack and price war. From a sound financial basis it has been reduced to a point where dealers are suffering staggering losses. The very competition that the politicians charged the big companies with strangling is dying under the malignant grip of a bitter and economically unjustified price war. What the result will be no man dare predict.

There is a lesson here, a lesson that is being paid for in bitterness and financial ruin. "Don't let it happen here," Mr. Mather told his Boston audience. It is sound advice that could be taken to heart far beyond the city limits of The Hub. As the markets become more competitive the temptation to cut prices to maintain volume will become more pressing. The New York disease should point up the folly of such action. With the money they have lost in the price war, New York milk dealers could have put on the greatest food selling campaign the city ever saw. It is not only tragic, it is stupid.

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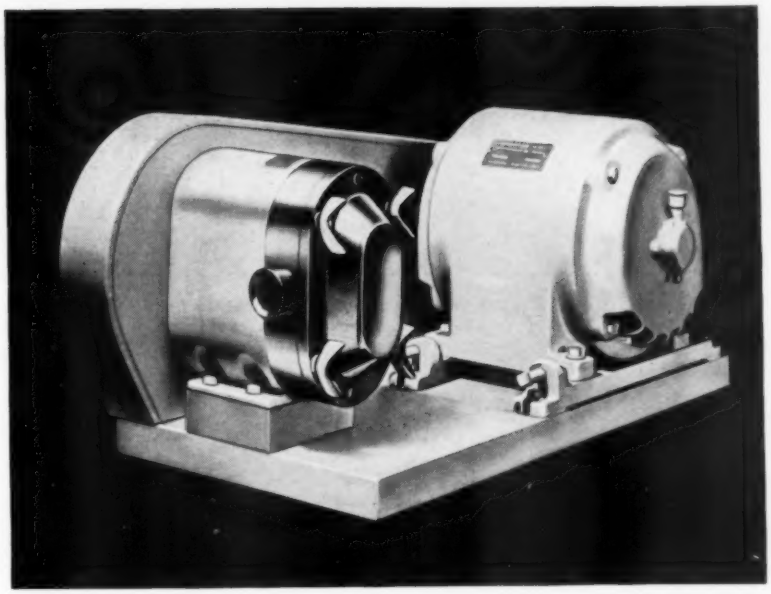

Think what this means to milk quality protection. You can expect the same richness, the same butterfat and cream content in your holding tank and processing that you get originally in your receiving tank. You're not rinsing valuable fats down the drain. That's why the Waukesha Sanitary Pump is so important to dairy profits. The Positive Displacement principle of operation, with its Twin Blade Impellers, produces smooth, even flow at all times, without churning, aerating recirculating or agitating the milk.

Ask your jobber about many other features of the Waukesha Pump – easier cleaning, greater sanitation, longer life under hard use. Or write direct for details.

WAUKESHA FOUNDRY CO.
WAUKESHA, WISCONSIN

Waukesha 100% SANITARY PUMP
DEPENDABLE PRODUCT OF A DEPENDABLE MANUFACTURER

Like the spokes of a mighty wheel symmetrical fields radiate from the hub that is the city of Nahalal. Settlers own their own homes, livestock and tools, but the land belongs to the Jewish people and is rented out to the farmers. Nahalal was founded in 1921.

ISRAEL — Land in Transition

The birth of a nation is always a time of turmoil. New forces, new ideas come into the great crucible of world experience.

In the historic land of Nazareth and Galilee the world's newest nation struggles with a multitude of problems. This is the story of the dairy industry in that ancient land that is standing once again as a sovereign among sovereigns.

By ERNEST STOCK

ISRAEL, A LAND once known for the milk that flowed in it, in 1950 is desperately trying to provide a bare minimum of the precious white liquid to its growing population. It is a population that is growing in more ways than one: in numbers — immigrants are still coming at the rate of 20,000 a month — and in size, the average age being among the lowest in the world.

Those responsible for the country's food supply are aware that there is no substitute for fresh milk, both for the undernourished newcomers and for the youngsters. Under the rationing scheme, infants under two get the highest priority: a pint a day. In the same category are the sick in hospital, pregnant mothers, and those over 65. Next, with a daily ration of 350 grams (about 3/5 pint) come all children between 2 and 18. What's left goes to the adults. It amounts to about 125 grams (¼ pint) per person per day.

Milch cows are now being imported in large quantities, but even the present rate of import — 4,000-5,000 a year — is just barely enough to keep up the rate of distribution as the population increases. The first several hundred head of a consignment of 3,000 cows bought by a purchasing mission in the States has just arrived. There was a fairly high casualty rate in the shipment, but Israel officials say that won't deter them from buying more. It's the only way, they explain. To give each adult 200 grams a day (in England, which also lives on austerity, the ration is 450 grams), would require 14,000 more cows right now. There are 20,000 milch cows in the country at present. Two thousand five hundred were lost during the war.

Shortage of Grazing

Aside from the shortage of cows, Israel is also plagued by a shortage of grazing facilities. Most of the cattle must be barn-fed, and this makes the cost of milk production

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You should consider NOW the possible economies of cold milk separation in your dairy. You can get the *straight facts* from your local Sharples dealer . . . or by writing to The Sharples Corporation.

Another reason for the new trend to Sharples by the Dairy Industry.

dairy division

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One quality, the best buy . . . SHARPLES
. . . completely stainless metal construction

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Czechoslovak pioneers do their milking in the valley of the Jordan. This is in the collective settlement of Shaar Hagolan.

With little regard for the political tides that ebb and flow these cattle chew their cuds against a background of Galilean hills.

extremely high. Milk now sells at 102 mils (about 30 cents) a liter (quart) retail; the farmer gets 80 mils (24 cents). The Government, in its sweeping anti-inflation program, in September forced the retail price down from 114 mils, but it now has to pay the producer a 5 mil per quart subsidy.

A program for the development of grazing land by artificial irrigation is now being worked on. Cattle breeding is vital to Israel's economy not only because the country is thirsting for the milk. It is also of enormous value for the development of its agriculture in general. It plays an important part in mixed farming, and grazing land is a cornerstone in the crop rotation system.

The average yield of the Israel milch cow is about 1,000 gallons (3,919 liters) a year, one of the world's highest. The local race is a cross between imported cows of high output and the Damascus breed – the best in the Near East.

Over a third of the cows are concentrated in the collective settlements (kibbutz), which in April 1949 – the last month on record–produced 36.4% of a total production of 6,884,000 liters. An almost equal amount was produced by the so-called smallholders' settlements, where a system of individual ownership prevails, while the products are marketed cooperatively. Most of the agricultural settlements – collective and "individualistic"– market their products through one organization: Tnuva.

Primitive Distribution Methods

Tnuva is one of the biggest businesses in all Israel. Its turnover during the 1948-49 fiscal year was £16 million (about $48,000,000), of which one-fourth was for milk. Tnuva's owners are 350 settlements from Dan to Beersheba, and even a little bit south of there. Like most of the octopus-like cooperative organizations in Israel (the biggest building firm is also a cooperative), Tnuva has little competition to contend with. Of the 4,454,000 quarts of milk that went into organized marketing channels in April, 1949, Tnuva distributed 3,253,000; 599,000 was used for dairy products, and only 602,000 went to other distributors.

But in spite of Tnuva's near-monopoly, its distribution methods are still primitive by American standards. Milk is not delivered in bottles or containers, mainly because of the additional cost, but also because there is no bottling equipment available. Instead, the milkman makes the rounds with 5 and 10-gallon cans on a small truck, a pushcart, or even hanging from his motorcycle. Talk about "keeping bottles quiet!" Then he ladles the liquid out into the housewife's container, or else the housewife goes herself to the nearest Tnuva store and has her container filled there.

Tnuva has eight dairy plants for processing its milk. Another ultra-modern plant, with pasteurization and other equipment imported from the U. S. under the Export-Import Bank's $100,000,000 loan to Israel, is now going up near Tel Aviv. At present not all the milk is pasteurized. "The population is accustomed to boiling it," one Tnuva official explained.

Butter Is High

Because of the shortage of milk, little butter or cheese is produced. Butter produced locally costs twice as much as that imported from Australia. The hard cheeses that are being made here compare favorably with the products of Sweden, Holland, Switzerland, according to Tnuva's Director, Mr. N. Verlinsky, who has tasted them all. Only cottage cheese, a staple food here, is made of skimmed milk powder receiver from the U. S. and Canada. Tnuva plans to make hard cheese out of 1,5 million liters of sheep's milk in 1950, and "brinza" – an oriental salted cheese – out of 750,000 liters.

Those settlements that do have cows manage to get back a nice profit on their investment. Especially since they don't have to pay for the cows – they are bought by the Jewish Agency and farmed out to the settlements, free, just as the Agency pays for a good part of the agricultural machinery, building costs and other expenses that go into a new agricultural colony before it is self-supporting.

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NEWS FLASH!

CHICAGO——DAIRY INDUSTRY HERE TODAY AGREED TO MOBILIZE GREATEST ADVERTISING, MERCHANDISING AND SALES CRUSADE IN HISTORY OF INDUSTRY...COAST-TO-COAST REPRESENTATIVES OF AROUSED INDUSTRY DRAFT SALES PLAN KEYED TO "SELLING OUR WAY TO SUCCESS." NEW SALES OBJECTIVES ON PRODUCT-BY-PRODUCT QUOTA BASIS DESIGNED TO BRING CONSUMPTION IN LEVEL WITH PRODUCTION. ADVERTISING AND MERCHANDISING ACTIVITIES POINTED TO EXPANDING MARKETS FOR MILK, BUTTER, CHEESE, ICE CREAM, EVAPORATED AND DRY MILK...LEADERS SEE YEAR 'ROUND ADVERTISING SET-ASIDE FOR ADA AS MEANS TO FINANCE URGENT SALES-BUILDING PROGRAM FOR INDUSTRY AND ITS PRODUCTS. DO IT WITH ADA IS THE NEW BATTLE CRY OF FIGHTING INDUSTRY!...WATCH COMING ISSUES FOR FURTHER BIG NEWS ON BUSINESS ACTION TAKEN AT DAIRY INDUSTRY RALLY JUST COMPLETED IN CHICAGO TO RECOVER BUTTER MARKET AND EXPAND MARKETS FOR ALL DAIRY PRODUCTS THROUGH AGGRESSIVE INDUSTRY-WIDE ADVERTISING!

AMERICAN DAIRY ASSOCIATION

The average individual, accustomed to think of oranges in terms of dozens, finds it hard to believe this picture of the receiving yard in a Los Angeles concentrate plant. But there they are, oranges by the truck load and by the ton. This is the Green Spot plant.

Oranges, Millions of Oranges

Most of us are familiar with orange juice. Few of us realize the meticulous care that goes into the preparation of orange concentrates. In a series of steps, some of which sound strangely familiar to dairymen, the juice of this grand fruit is processed for the market. This story tells you how it is done.

HEAT EXCHANGER, flash pasteurize, stainless steel, quality control, these are familiar terms to dairymen everywhere. When one reads "98 per cent sterility of airborne bacteria", "washed clean in a sterilizing solution", "arresting enzyme action", one can hardly be blamed for saying "You're talking about milk, mister. You're talking about the most carefully processed food in the world." Actually we're not talking about milk at all. We're talking about orange juice concentrate.

During the last ten years the distribution of a high quality orangeade on the dairy route has been carried out successfully by dairymen whose number must be reckoned in the thousands. Progressive dealers with an eye on that all important "net profit" saw in the orangeade a practical, profitable item for their routes. Furthermore they saw that handling the product required little or no extra equipment due to the similarity of the practices involved in processing milk and oranges.

The orange people on their part saw in the dairy industry a top drawer answer to their distribution problem and an industry that enjoyed a reputation and a respect that could not be duplicated. There were mutual advantages. As a result the business of making orange concentrate by a manufacturer located close to the orange groves, has grown into a big business. Dairymen, reconstituting the concentrate in their own plants and distributing the product on their routes, have profited handily. Some operators have reported better than fifty per cent gross profits from their orangeade venture.

The secret in an orange operation, just as much as in a milk operation, is a quality product, properly distributed. It is a feather of substantial size in the dairy industry's cap that the orange people saw in the milk business not only a logical ally but also a pattern of careful processing that could be applied to their industry. It is not putting an undue strain on the truth to say that the orange concentrate industry is first cousin to the dairy business.

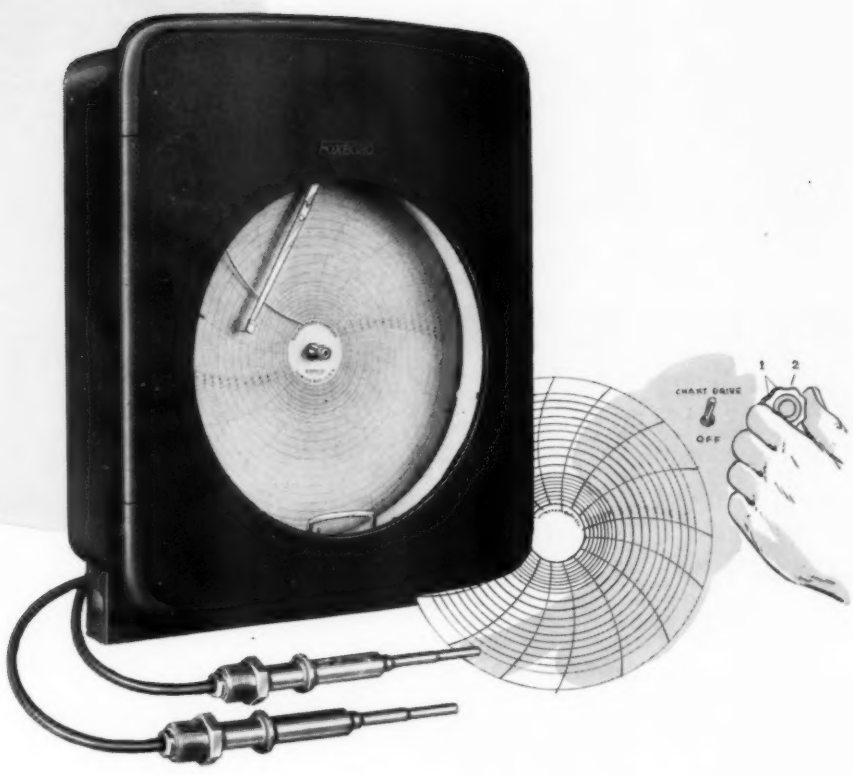
Quality Begins on the Farm

It is an axiom in the dairy business that quality begins on the farm. The finished product is no better than the raw material. Similarly in the orange business emphasis is placed on quality. Of the thousands of tons and millions of oranges that come into a great plant like that of Green Spot in Los Angeles, the good are separated from the bad. Long conveyors carry the oranges from the storage bins to the inspection tables where fair and foul come to a parting of the ways.

If it meets the quality standards the fruit is dumped into a large tank containing a sterile solution, where it is given a good sound washing followed by a clear water rinse. From the washer the fruit moves by conveyor to the extracting room. One can only conclude that oranges must be feminine to get all prettied up before being squeezed.

The extracting process is one of those simple marvels of efficiency so characteristic of American industry. The pork people boast that they use everything but the squeal. The orange people go them one better because they use everything including the peel. Machines called graters remove skin from the orange. The peel is carried to settling tanks by means of flowing water. The water in the

for the first time!



HTST TIMING

with turn-of-a-knob simplicity and high sustained accuracy

Here's a new, simple method for accurately measuring and recording holding time during high temperature short time milk pasteurization. It has been developed to fill a long-time need for a quick, reliable check that avoids plant shut-down, after-hour work and burdensome expense. Featuring the new Foxboro Timer, it offers many important advantages including:

- Holding time taken on actual milk for maximum accuracy
- Timing test can be made at any time without preliminary preparation
- No interruption of pasteurizer operation during timing test
- Less than 30 seconds required for test
- Test can be made by one man. Little skill required
- Highest sustained accuracy
- Accuracy of timing entirely unaffected by lag
- Timer makes permanent chart record of test available to health authorities
- Instrument requires practically no maintenance.

Write for bulletin 433. **The Foxboro Co., 108 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO
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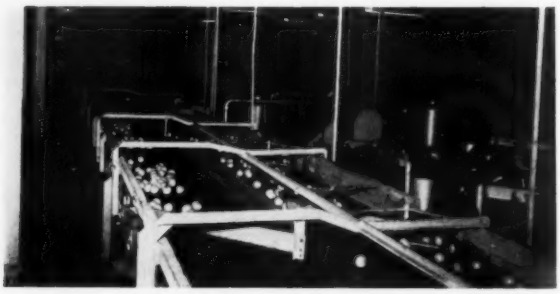
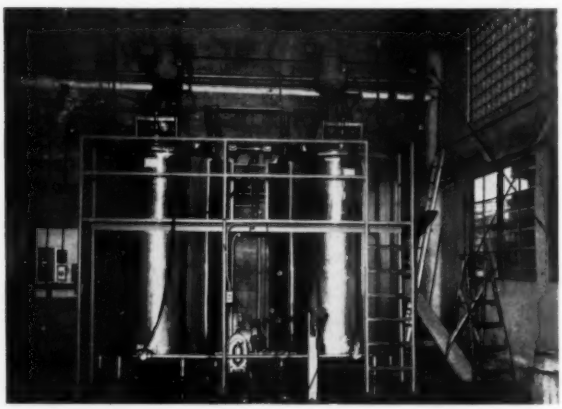
Instruments that improve product uniformity

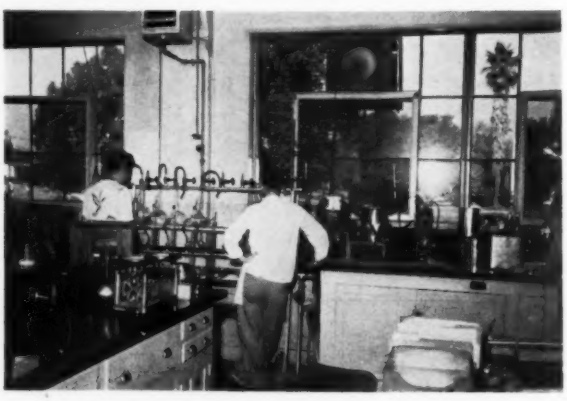
On long conveyor belts, oranges move to the inspection tables. Careful inspection reminds one of dairy receiving platform.



The exacting room houses the equipment for separating juice and pulp. Juice goes to concentrator, pulp goes to dehydrators.



Huge blending tanks combine concentrate from different harvests into a uniform product, product goes to filling machines.



Laboratory control is said to be the secret of quality orangeade. Careful checks are made of the product as it evolves.

settling tanks is maintained at a temperature of 80 degrees. The water absorbs the fresh orange oil which is recovered through centrifugal separation. The pulp is taken to immense driers where it is dehydrated to less than ten per cent moisture and packed for use as animal feed.

Everything Including the Peel

Meanwhile the orange minus its peel has been turned over to the gleaming efficiency of a stainless steel press. It is in this extracting room that ultra-violet ray lamps hammer airborne bacteria down to practically nothing, 98 per cent sterility is achieved. The orange, now transformed into a golden juice, passes through a strainer where seeds and excess pulp are removed.

Up to this point the orange has had a middling rough time, washed, peeled, squeezed, and strained. If it were not for the fact that the end product is so good one might be tempted to sympathize with the valencias as they make their sterile, stainless steel pilgrimage. They are not over the hump yet.

From the strainer the juice flows through the heat exchanger where it is flash pasteurized to arrest enzyme action. This pasteurizer is the same type of unit employed in the dairy plant. The concentrator is the next step in the process. Juice enters these huge cylindrical affairs at 100 degrees F. with 28 inches of vacuum. The juice literally explodes and in the process of exploding loses 60 per cent of its water. This is all done in a matter of seconds. Another concentrator with a higher vacuum nicks the juice for 25 per cent more water leaving a concentrate that tests 65 per cent fruit solids. This concentrate is carried off by vacuum to the blending tanks where it is blended with concentrates from previous harvests in order to produce a uniformly good finished product.

Pasteurized Before Packing

Blended concentrate is now flash pasteurized and packed in lacquer lined containers. The cans are filled automatically and then sealed. Just prior to sealing the final step in this long line of careful procedures is consumated. The oxygen is eliminated by a blanket of nitrogen. The hot containers are moved into a cooler where the temperature is reduced to 90 degrees. The entire time lapse from the moment the juice entered the concentrator to the time it leaves the cooler pasteurized, blanketed with protective nitrogen, sealed in a container, and cooled is an amazing sixteen minutes. From the cooler the packaged concentrate goes by conveyor to a refrigerated storage where it remains until shipped.

Like any sound food operation the laboratory is the key to quality control in the orangeade business. The entire operation is under laboratory control and is described by a leading concentrate manufacturer as "one of our most costly departments, but one which saves its weight in gold". The laboratory checks such things as cleaning solutions, the clean fruit, the fruit as it enters the presses, flavor, fruit solids, and acids before and after the concentration process, the blending operation, packing, and the finished pack after it has been in storage four days. The

(Please turn to Page 86)

XUM

An Indiana milk producer* added a new Henszey Effect to an existing coil type pan. Result — 11,000 pounds per hour, condensing skimmilk, 4 to 1!

*Name on request.

Top can be swung open for inspection. Notice the Outlet Separator — a Henszey feature that assures 99.90% milk solid recovery.

Bottom door opens making all inside "straight-through" surfaces visible and easily accessible.

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DOUBLE Evaporating Capacity Without Extra Steam or Water!

A New Henszey Effect can be installed to operate as an integral part of your present serviceable evaporating equipment. Think of the savings of such an installation in your plant! The Indiana milk producer shown did this and is able to double his output at no increase in steam or water consumption . . . resulting in twice the capacity at only half the initial cost of an entire new system. In this installation the equipment became exceedingly flexible . . . it can now be used continuously with automatic feed control. Fast, thorough cleaning is also accomplished as though it were one unit! As the need for more capacity increases (or if the original equipment needs replacement), new stainless steel Henszey Effects — requiring a minimum of space — are easily added to provide all the efficiency of a Henszey Multiple Effect Evaporator.

Write for complete details and descriptive bulletin.

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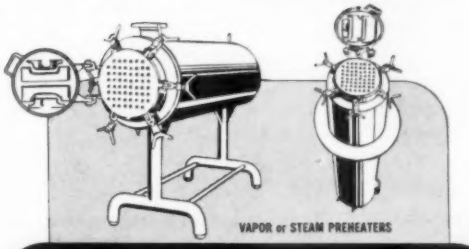

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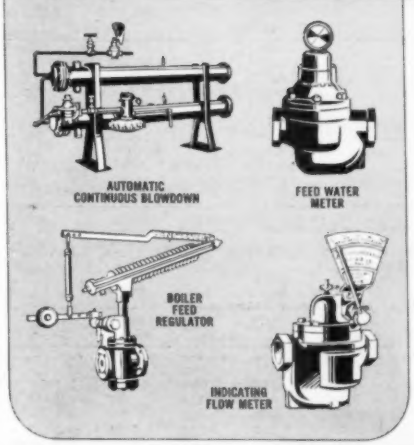

U. S. Milk Production In '49 Just Shades 119 Billion Pounds

Increase over 1948 Likely to Be Accentuated as Heifer Numbers Show Continued Gain—Prices Have Held Up

By FRANK URNER

DESPITE a decline of 192,000 in the cow population milk production in the United States was 3 per cent greater in 1949 than the previous year. Possibly even more significant, however, is the fact that the long decline in cow numbers appears to have come to an end as dairy farmers increase the number of heifers kept on the farm. These are the outstanding features of the fluid milk production figures for 1949 just released through the Bureau of Agricultural Economics USDA. The report was prepared under the direction of B. H. Bennett, head of the Division of Dairy Statistics.

The 1949 flow of 119,136 million pounds of milk was topped only by the '45 and '46 figures. It was achieved by a record production of 5,239 pounds per cow. This exceptional performance record is due to a steady improvement in breeding, plentiful supplies of better feeds and to the widespread culling of the poorer producers. Farmers have been quick to take advantage of the high meat prices since the war. High feed costs in the same period meant that only the heavy producers were worth keeping for milk.

Table No. 1 shows clearly the very substantial gain that has been made over the years in the production rate per cow. It also shows that the per capita production, while up slightly in '49 over '48, is down considerably below any other year in the table.

Realizing, apparently, that this lower per capita production rate should indicate a favorable picture for an increased milk flow the dairymen of the country kept on their farms in 1949 a larger number of heifers. This is the first time in five years that an increase has been indicated in the number of cows kept for milk. It would now appear that a real upswing in the milk cow cycle is underway.

Table No. 2 shows the decided increase in heifer calves, under a year old, that were kept last year for milk cows. The East-north-central and West north-central states show the smallest increases and this might possibly be due to a gradual decline of butter's importance in the over-all dairy scene.

TABLE 1. — MILK COWS AND MILK PRODUCTION ON FARMS, UNITED STATES, 1925-39 AVERAGE AND 1940-49

Year	Number of milk cows on farms [1]	Production per milk cow		Total milk production on farms	
		Milk	Butterfat	Quantity	Amount per capita
	Thousands	Pounds		Mil. lb.	Pounds
1925-39 av.	22,952	4,379	172	100,369	807
1940	23,677	4,625	184	109,502	830
1941	24,312	4,741	188	115,268	865
1942	25,081	4,740	188	118,884	883
1943	25,574	4,606	183	117,785	863
1944	25,775	4,578	182	117,992	855
1945	25,329	4,797	191	121,504	870
1946	24,475	4,891	194	119,713	848
1947	23,825	4,997	199	119,065	827
1948	22,933	5,038	201	115,527	788
1949	22,741	5,239	209	119,136	798

[1] Average number on farms during year, excluding heifers not yet fresh.

TABLE 2. — COWS, HEIFERS, AND HEIFER CALVES KEPT FOR MILK ON FARMS, JANUARY 1 — BY AGE GROUPS, 1939-48 AVERAGE, AND 1949-50

STATE	Cows and heifers 2 years old and over kept for milk			Heifers 1 to 2 years old kept for milk cows			Heifer calves under 1 year kept for milk cows		
	1939-48 average	1949	1950	1939-48 average	1949	1950	1939-48 average	1949	1950
N. Atl.	3,314	3,356	3,406	681	723	742	711	768	801
E. N. Cent.	6,446	6,253	6,228	1,421	1,411	1,461	1,558	1,572	1,621
W. N. Cent.	6,625	5,578	5,548	1,470	1,296	1,273	1,672	1,577	1,675
S. Atl.	2,006	2,052	2,130	438	437	477	501	550	612
S. Cent.	5,375	4,865	4,972	1,202	1,072	1,103	1,434	1,398	1,561
West.	2,408	2,312	2,341	586	557	554	687	751	760
U. S.	26,175	24,416	24,625	5,799	5,496	5,610	6,562	6,616	7,030

The country-wide figure is substantial, however. Some of the increase is attributed to the fact that the imposition of acreage allotments on several of the important crops has resulted in some shift to forage and pasture which will be utilized primarily by milk cows and other livestock.

Fluid milk prices have held up at relatively high levels, however, and it is probable that this is the principle factor which has induced the upward swing in cow population. Prices in 1949 were down from the preceding year, but were far and away above any other year on record, except for 1947 which was just slightly lower. Important, on this score, is the fact that, while prices on dairy products have declined some, they have not dropped with anything resembling the precipitous decline of many other agricultural commodities.

In Table No. 3 the retail and wholesale price record of fluid milk over the past nineteen years is shown. It can be seen that the declines recorded in 1949 are the first since 1939.

Table No. 3	Dealers Buying Prices 3.5% Milk Cwt.	Retail Price Deliv. c per qt.
1931	$2.20	11.8
1932	1.72	10.2
1933	1.60	10.1
1934	1.89	10.9
1935	2.05	11.3
1936	2.13	11.8
1937	2.32	12.4
1938	2.26	12.3
1939	2.17	12.0
1940	2.21	12.1
1941	2.40	13.0
1942	2.79	14.2
1943	3.16	14.8
1944	3.24	14.9
1945	3.26	14.9
1946	3.92	16.9
1947	4.71	19.0
1948	5.17	20.9
1949	4.76	20.2

Even the weather creeps into what otherwise might be dry statistics. Table No. 4 gives the 1949 milk production by months and the percentage of each of the comparable 1938-47 average and the 1948 production figures. Note the decided break in the three summer months.

Table No. 4	1949 Prod. Mil. pounds	Percent of 1938-47	Percent of 1948
Jan.	8,671	104	105
Feb.	8,395	104	103
Mar.	9,616	103	105
Apr.	10,324	104	104
May	12,069	103	103
June	12,372	102	102
July	11,559	101	100
Aug.	10,574	103	101
Sept.	9,427	104	103
Oct.	9,056	105	104
Nov.	8,451	106	105
Dec.	8,622	105	105
Year	119,136	103	103

Copies of this report may be secured by writing the Bureau of Agricultural Economics, Washington, D. C. The bulletin is entitled "Milk Production on Farms and Statistics of Dairy Plant Products, 1949".

XUM

BULK SHIPPERS!

New VISQUEEN* film drum liners save up to $50,000

Wisconsin-to-Florida shipper reports tare weight savings of 5,480 lbs. per car . . . money savings of $105.75 per car . . . total annual savings $50,000.

VISQUEEN film liners combined with fiber drums, cartons or metal containers will save big money if you ship:

- Butter in Bulk
- Dried Buttermilk
- Condensed Buttermilk
- Whey Products
- Cottage Cheese in Bulk
- Liquid Cream
- Frozen Cream
- Ice Cream Mixes
- Dry Powdered Skim Milk

FIBER DRUM with VISQUEEN film liner. Very strong, very tear-resistant VISQUEEN film is also taste-free, odor-free and 100% pure—ideal for shipping a wide variety of dairy products. VISQUEEN film is highly moisture-proof, perfect for sealing hygroscopics against hardening or lumping during shipment or storage. No cleaning or reconditioning of this package. No "return" expense. A perfect "one-way" shipping container!

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Name.....
Company.....
Title.....
Address.....
City.....Zone....State.....

Balloons and people are characteristic of open house. If properly handled, crowds such as this one, go away with a friendly feeling toward, and a better understanding of, the dairy business.

OPEN HOUSE — A Mighty Good Way To Win Friends

By LUTHER KOHR

IN A LARGE Eastern city, a newspaper recently attacked virtually all of the milk dealers in the community. The newspaper alleged the dealers were selling unclean milk which had been processed in dirty equipment. A number of the companies, some unrightly so, were named in the article. Those wronged against, *as well as those companies supposedly exonerated by the omission of their names from the newspaper article,* lost business.

And they have *no* redress except through costly, lengthy court proceedings—AND, IF THEY SHOULD GO TO COURT AND IF THEY SHOULD LOSE, THEY WOULD BE MUCH WORSE OFF THAN THEY ARE EVEN NOW.

Whether it is good or bad, radio and newspapers are a great factor in formulating public opinion.

But all business, to some extent, can also mold public opinion.

Among Them Are the Milk Dealers

It is TOO LATE now to do it in the city where the newspaper made the expose, but milk dealers elsewhere should start molding public opinion before it is TOO LATE by holding "Open House" and by urging school teachers to bring their pupils to inspect the dairy.

I once heard a milkman, the owner of a large, modern, clean plant, admit, "There is nothing like an 'Open House' to inspire all of us, myself included, to get busy and make this place look extra nice."

If the public has been to your dairy and has seen for itself, the public will think a second time before accepting as gospel truth any charges by a newspaper—or anyone else—that your dairy is untidy and your milk unsafe.

YOU should hold "Open House" for the general public at least once a year. Also have school children, in groups in charge of their teachers, visit your dairy.

Luther Kohr, energetic owner of Luther Kohr Dairy Enterprises, is a journalist in his own right. As a former newspaper man and editor of the magazine Certified Milk, he has more than a passing acquaintance with the vagaries of human behavior. He is currently editing and producing a smart little dairy promotion brochure entiled "You, Yours and Life." In this article he tells some of the DO'S and DON'TS of holding open house.

The tours by school children should be carefully organized. Find out what time of the year they are studying about milk. If you are in a small community, maybe you want to try to have all of the students every year. If you are in a large community, maybe you want to have the youngsters when they are studying about milk for the first time . . . . perhaps this would be the second-graders at the time they are being taught about the cow. Perhaps you also would want a grade from Junior High (seventh, eighth or ninth grades) when they are studying the life of Louis Pasteur.

Don't overlook the value of school children as salesmen. They are at the impressionable age. What they see and hear and learn—*AND DECIDE*—will be carried home to their mothers and fathers.

Here are some pointers to keep in mind when showing children through the plant.

1. *SIZE OF GROUP.* If you have any choice in the matter, take no more than 25 at a time.

2. *MOVIE ON MILK.* If you have a movie taken of some of the farms

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XUM

An enticing collection of gifts was part of the week long open house held by Viall's Dairy, Inc. of Providence, Rhode Island. More than 16,000 people visited the plant during the seven day period.

Ooops—it's a long way down, bub. In the shadow of a giant milk bottle, the nephew of Miss Myrtle E. Viall, manager of the dairy, explores the interior of an intriguing box.

from which you buy your milk and of the operations in your own plant, recommend to the school teacher that this movie be shown to the children in their classroom the day before or the day of their visit. They will have a better understanding and greater appreciation of what they see. At your plant, the movie comes to life for them. The second-graders are especially thrilled. They will enjoy their visit more. If you have no movie, you can buy a movie on the production of milk from the Milk Industry Foundation – or the National Dairy Council.

3. *GREETER.* The person showing the school children through the plant should know the name of the teacher and of the school the pupils represent. Put it on a personal basis. You will really make them feel welcome.

4. *INTRODUCTION.* Before showing the youngsters through the plant, there should be a get-acquainted period of about 15 minutes in a room set aside for such purposes. The discussion can be opened by asking if there are any questions on the movie; if everyone has been to a farm and has seen a *cow;* if anyone has a father, relative or neighbor working at the milk plant. (If the last question brings any response, be sure to explain what the individual does.) If you have no one in your employment qualified to lead such a discussion and to show the group around, hire a former school teacher, who is married and not working, on a part-time basis. Many of them would be glad to accept credit on their milk bill in return for their services.

5. *ESSAY CONTEST.* Try to work out an essay contest in connection with the visit. You must have the cooperation of the teacher for this, and insist that the teacher, or some other school authorities, or persons designated by them, be the judges of the contest. For the first prize, give a quart of milk free for 30 days; for runner-up, a quart of milk every day for a week. (During the "Open House" for adults, be sure to get the names and addresses of everyone attending by holding a free drawing every night for a quart of milk delivered free for 30 days!)

6. *ORDER OF TOUR.* The tour of the plant should start by viewing the tanks in which the product is held after the milk is received from the farmers. The tour should end with the bottled product in the refrigeration room. To express to the students the capacity of the holding tank, translate it into half pints . . . . tell each group how many similar groups of their size could each get a half-pint of milk from this tank.

7. *SIGNS.* Signs should be placed over all the equipment so that the grown members of the party have a definite understanding of the purpose of each piece of equipment. This must not be overlooked at the "Open House" for adults.

8. *CHOCOLATE MILK.* Most youngsters love chocolate milk. If you make it, prepare a batch while they are there. Explain the process to them.

9. *CLEANLINESS.* Explain to them the great care that goes into

(Please turn to Page 85)

PROFITS MOUNT WITH...

Buflovak VAPOR MILK HEATERS

Save Valuable Steam and Cooling Water

Water and fuel shortages are making headlines. These shortages will undoubtedly be alleviated but not without substantial increases in cost to the consumer. You can beat the current scarcity and the ensuing higher prices by equipping your present Buflovak Evaporator with a Buflovak Vapor Milk Heater. And if you are contemplating replacing outmoded equipment or expanding with a new Buflovak Multiple Effect Evaporator, cut operating costs by including a fuel saving, water saving Buflovak Vapor Heater.

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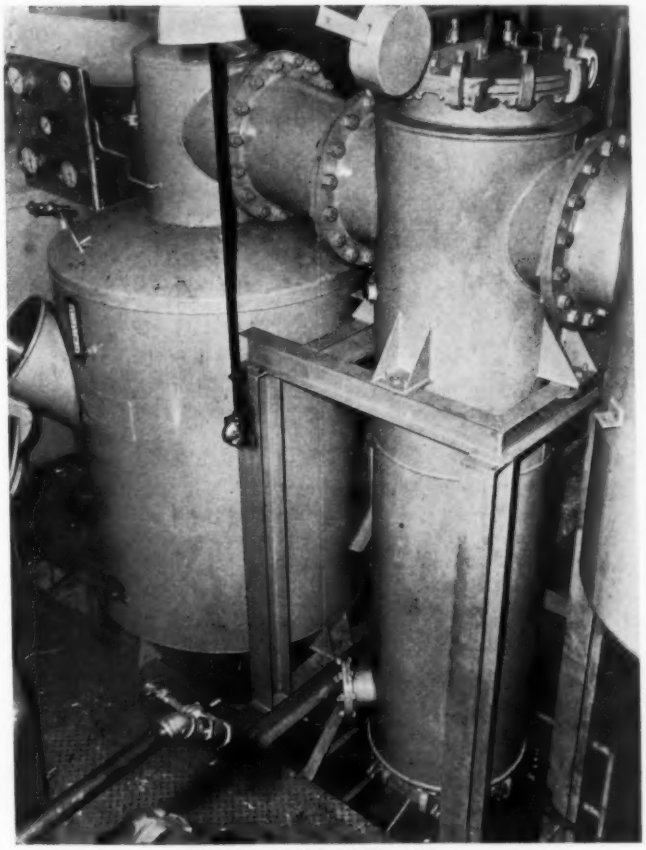
Here is a twin saving that pays for the equipment in a short time and continues to lower production cost and build profits as long as the vapor heater is in operation.

Remember, Buflovak Vapor Heaters can be furnished with NEW



Write for Bulletins 343 and 344.

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dries skimmilk, whole milk and sweet and sour buttermilk. Profits increase through top product quality, low production costs and large capacity.

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Federal And State Standards For

	MILK			SKIM MILK	CREAM	BUTTER	SWEETENED CONDENSED MILK		COND. SKIM MILK	EVAPORATED MILK		PLAIN ICE
	MILK FAT	NONFAT MILK SOLIDS	TOTAL MILK SOLIDS	TOTAL MILK SOLIDS	MILK FAT	MILK FAT	MILK FAT	TOTAL MILK SOLIDS	TOTAL MILK SOLIDS	MILK FAT	TOTAL MILK SOLIDS	MILK FAT
	Minimum percent	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*
Federal....	-----	-----	-----	-----	1/18	80	8.5	28.0	-----	7.9	25.9	-----
Ala.....	3.25	8.50	11.75	8.50	18	8/80	8.0	28.0	-----	7.8	25.5	10
Alaska.....	3.25	8.00	11.25	8.00	18	Federal	Federal	Federal	-----	Federal	Federal	10
Ariz.....	3.25	8.50	11.75	8.80	15/18	9/80	8.5	28.0	-----	7.9	25.9	10
Ark.....	3.25	8.00	11.25	8.00	18	80	8.0	28.0	28.0	7.9	25.5	10
Calif.....	3.50	8.15	-----	8.50	19/20	80	8.5	28.0	-----	7.9	25.9	10
Colo.....	3.20	-----	-----	-----	18	8/80	7.7	28.0	-----	7.7	-----	12
Conn.....	3.25	8.50	11.75	-----	22/	80	8.0	28.0	-----	7.8	25.5	10
Del.....	3.50	-----	12.00	-----	18	-----	8.0	-----	-----	7.8	25.5	12
D. C.....	3.50	-----	11.50	9.00	20	80	-----	-----	-----	-----	-----	8
Fla.....	3.25	8.50	-----	-----	18	8/80	8.0	28.0	-----	7.8	25.5	10
Ga.....	3.25	8.50	11.75	9.25	18	80	8.0	28.0	-----	7.8	25.5	24/ 10
Hawaii.....	3.00	8.50	-----	-----	25/18	80	-----	-----	-----	-----	-----	24/ 12
Idaho.....	3.20	8.00	11.00	9.30	18	80	-----	-----	-----	7.8	25.5	28/ 12
Ill.....	3.00	8.50	11.50	9.25	25/18	80	8.5	28.0	24.0	7.9	25.9	12
Ind.....	3.25	8.00	-----	8.50	25,33/18	80	8.5	28.0	-----	7.9	25.9	28/ 10
Iowa.....	3.00	8.50	11.50	34/	16	80	8.0	28.0	-----	7.8	25.5	24/ 12
Kans.....	3.25	-----	-----	-----	18	80	8.0	28.0	-----	7.8	25.5	10
Ky.....	3.25	8.00	-----	-----	18	80	8.0	28.0	-----	7.8	25.5	10
La.....	3.50	8.50	12.00	8.00	18	80	8.0	28.0	28.0	7.9	25.5	24/ 10
Maine.....	3.25	8.50	11.75	-----	18	-----	40/	26.5	-----	40/	26.5	12
Md.....	3.50	-----	12.00	-----	18	80	8.5	28.0	-----	7.9	25.9	24/ 12
Mass.....	3.35	-----	12.00	9.30	41/ 16	80	8.0	24.0	-----	7.8	-----	10
Mich.....	3.00	8.50	-----	-----	26/ 18	80	-----	-----	-----	-----	-----	12
Minn.....	3.25	-----	-----	-----	25,33/20	80	8.5	28.0	24.0	7.9	25.9	24/ 12
Miss.....	3.00	8.50	11.75	8.50	18	80	8.0	28.0	-----	7.8	25.5	24/ 10
Mo.....	3.25	8.00	-----	-----	25/ 18	80	8.0	28.0	-----	7.9	25.9	8
Mont.....	3.25	8.00	11.25	8.00	20	80	8.0	28.0	-----	7.8	25.5	10
Nebr.....	3.00	-----	-----	9.25	18	80	-----	-----	-----	-----	-----	24/ 12
Nev.....	3.25	8.50	11.75	-----	22	80	8.0	28.0	-----	7.8	25.5	24/ 14
N. H.....	3.35	-----	11.85	8.50	18	8/80	8.5	28.0	-----	7.9	25.9	24/ 14
N. J.....	3.00	-----	11.50	-----	16	8/80	8.0	28.0	-----	7.8	25.5	10
N. M.....	3.25	8.50	11.75	-----	18	8/80	8.0	28.0	-----	7.8	25.5	12
N. Y.....	3.00	-----	11.50	8.50	47/ 18	80	8.0	28.0	-----	7.8	25.5	10
N. C.....	3.25	8.50	11.75	-----	18	80	8.5	28.0	-----	7.9	25.7	24/ 10
N. Dak.....	3.25	-----	11.50	8.50	20	80	8.5	28.0	24.0	7.9	25.9	24/ 12
Ohio	3.00	-----	12.00	-----	25/ 18	80	49/	-----	-----	-----	-----	28/ 10
Okla.....	3.25	8.00	11.25	-----	18	8/80	Federal	Federal	-----	Federal	Federal	24/ 10
Oreg.....	3.20	8.50	11.70	-----	18	80	-----	-----	-----	7.8	25.5	24/ 12
Pa.....	3.25	-----	12.00	-----	18	80	8.0	28.0	28.0	7.8	25.5	10
P. R.....	3.00	9.00	12.00	-----	Federal	Federal	Federal	Federal	-----	Federal	Federal	-----
R. I.....	3.25	-----	12.00	-----	52/ 18	80	8.0	28.0	-----	7.8	25.5	8
S. C.....	3.25	8.00	11.25	8.00	18	-----	8.0	28.0	-----	-----	-----	28/ 10
S. Dak.....	3.25	8.50	11.75	9.25	18	80	8.0	28.0	-----	7.8	25.5	24/ 12
Tenn.....	3.25	8.50	12.00	-----	25/ 18	80	8.0	28.0	24.0	7.8	53/25.5	10
Texas.....	3.25	8.00	-----	-----	25/ 18	80	8.0	28.0	24.0	7.8	25.5	8
Utah.....	3.20	8.30	11.50	8.50	25/ 18	80	7.8	25.0	-----	7.8	25.5	12
Vt.....	3.25	8.50	11.75	8.50	18	8/80	8.0	28.0	-----	7.8	25.5	24/ 14
Va.....	3.25	8.50	11.75	8.50	18	80	7.8	25.5	-----	7.8	25.5	24/ 10
Wash.....	3.25	8.00	-----	-----	58/ 18	80	7.8	25.5	-----	7.8	25.5	10
W. Va.....	3.00	8.50	11.50	9.00	25/ 18	80	7.8	28.0	20.0	7.8	25.5	8
Wis.....	3.00	8.25	-----	8.50	25/ 18	60/82.5	61/8.0	61/28.0	28.0	61/8.0	61/26.15	13
Wyo.....	3.00	8.50	11.50	9.25	25/ 18	80	7.9	25.9	18.0	7.9	25.9	28/ 10

Figures in the table that appear thus-- 1/, 2/, 3/, etc., -- refer to footnotes on the last page.

The Composition Of Milk Products

CREAM		FRUIT OR NUT ICE CREAM		FROZEN CUSTARD		DRIED MILK		NONFAT DRY MILK SOLIDS		CHEDDAR CHEESE		SWISS CHEESE	OTHER CHEESE
TOTAL MILK SOLIDS	MILK FAT	TOTAL MILK SOLIDS	MILK FAT	TOTAL MILK SOLIDS	MILK FAT	WATER	MILK FAT	WATER	MILK FAT IN SOLIDS	WATER	MILK FAT IN SOLIDS	
Minimum percent	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Minimum percent*	*Maximum percent*	*Maximum percent*	*Maximum percent*	*Minimum percent*	*Maximum percent*	*Minimum percent*		
-----	-----	-----	-----	-----	26.0	5	1.5	5	50	39	-----	2-7/, inc.
9/18	8	9/18	10	-----	26.0	5	-----	5	10/	39	45	11,12/
9/18	8	9/14	13/ 8	14/	-----	-----	-----	-----	-----	-----	-----	
16/	8	16/	-----	-----	-----	-----	-----	-----	50	39	-----	17/
9/18	8	9/14	18/ 10	9/ 14	-----	-----	-----	-----	50	39	-----	
9/	8	9/	20/ 10	-----	26.0	5	1.5	5	50	39	45	4,7,21/
-----	10	-----	-----	-----	-----	-----	-----	-----	50	-----	-----	
9,23/	8	9,23/	-----	-----	-----	-----	-----	-----	50	39	45	
-----	10	-----	12	-----	-----	-----	-----	-----	-----	-----	-----	
-----	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
9/18	8	9/14	10	9/ 18	26.5	5	-----	5	50	-----	-----	
-----	24/ 8	-----	-----	-----	-----	-----	-----	-----	50	39	-----	
9/18	24,26/10	9,26/15	27/ 12	18	-----	-----	-----	-----	-----	-----	-----	
9/18	28/ 10	9/ 14	-----	-----	-----	-----	-----	-----	29/	-----	-----	
30/	10	30/	-----	-----	27.0	5	1.5	5	31/50	31/ 39	31/ 45	32/
9/16	28/ 8	9/ 14	-----	-----	-----	-----	1.5	5	50	39	-----	2-7/, inc.
9/20	24/ 10	16	35/ 10	-----	26.0	5	-----	5	29/	-----	-----	11,32,36/
37/20	10	37/ 20	-----	-----	-----	-----	-----	-----	50	-----	-----	
18	38/ 10	38/ 18	38/ 10	38/ 18	-----	-----	-----	-----	50	39	45	
9/20	24/ 8	30/ 16	8	18	-----	-----	-----	-----	50	39	45	
-----	10	-----	-----	-----	26.0	5	-----	-----	50	-----	-----	
20	24/ 10	15	20/ 12	20	-----	-----	-----	-----	50	39	-----	
9/18.5	8	9/ 16.5	10	18.5	-----	-----	-----	-----	50	-----	45	42/
9,43/	10	9,43/	12	9,43/	-----	-----	-----	-----	50	40	43	
9/20	24/ 10	9/ 16	24,44/12	9/ 20	26.0	5	1.5	5	50	39	45	2-7/, inc.
9,45/	24/ 8	9,45/	24/ 8	9/ 16	-----	-----	-----	-----	50	39	-----	11,46/
-----	8	-----	-----	-----	-----	-----	-----	-----	50	39	45	
37/	9	37/	10	37/	-----	-----	-----	-----	50	39	-----	
20	24/ 10	18	12	20	-----	-----	-----	-----	50	38	43	
-----	24/ 12	-----	Egg solids, 2%		-----	-----	-----	-----	50	-----	45	
-----	24/ 12	-----	24/ 14	-----	-----	-----	-----	5	50	39	-----	4,6,7/
-----	8	-----	20/ 10	-----	-----	-----	-----	-----	50	39	-----	
20	10	-----	-----	-----	26.5	5	-----	5	50	-----	-----	
9/ 18	26/ 8	9,26/14	27/ 10	9/ 18	-----	-----	-----	-----	48/50	39	-----	2/
9,45/	24/ 8	9,45/	20/ 8	9/ 16	-----	-----	-----	-----	50	39	45	
-----	24/ 10	-----	-----	-----	26.0	5	-----	-----	50	39	45	
18	26,28/ 8	14	20,28/10	18	26.0	5	-----	5	50	39	-----	2,3/
21	24/ 10	21	-----	-----	-----	-----	-----	-----	Federal	Federal	-----	
9/ 20	24/ 10	9/ 18	-----	-----	-----	-----	-----	-----	50/50	-----	-----	
51/	8	51/	-----	-----	-----	-----	-----	-----	-----	-----	-----	
-----	-----	-----	-----	-----	Federal	Federal	Federal	Federal	Federal	Federal	-----	
-----	8	-----	-----	-----	-----	-----	-----	-----	50	39	-----	
9/ 18	28,38/10	9,38/18	20,28/10	9/ 18	-----	-----	-----	-----	-----	-----	-----	
9,43/	24,26/10	9,43/	20,24/12	9,43/	-----	-----	-----	-----	50	39	45	
9/ 18	26/ 8	9/ 14	18/ 8	9/ 14	26.0	5	-----	-----	50	39	-----	11,32/
-----	6	-----	-----	-----	26.0	5	-----	-----	50	39	45	11,54/
9,55/	9	9,55/	-----	-----	26.0	5	1.5	5	50	39	45	3,11,54,56,57/
9/	24/ 12	9/	-----	-----	-----	-----	-----	-----	50	39	-----	
45/	24,26/ 8	45/	13/ 8	14/	-----	-----	-----	-----	50	-----	-----	
20	10	20	-----	-----	26.0	5	-----	5	59/50	39	45	7,11,46/
18	38/ 8	38/ 18	-----	-----	26.0	5	-----	5	50	-----	-----	
62/	11	62/	44/ 13	-----	-----	-----	1.5	5	50	63/ 39	64/ 45	6,7/
9,65/18	28/ 10	9,65/18	28,44/10	9,65/18	Federal	Federal	Federal	Federal	50	39	-----	7/

PLAIN TALK from a PLAINS STATE

By JOHN BURNHAM, *Fargo, North Dakota*

WE ENVY HERBLOCK, the great newspaper cartoonist. We'd like to put thoughts into a few sharp lines as capably as he does. We'd like to draw a cartoon showing America—the United States—standing like a valiant she wolf at the door of her den, while swaggering up the trail toward the den comes a huge bear.

The wolf is scarred by past battles, but completely undaunted. She will fight to the finish. But hanging from her udders are the over-fat half grown pups which will not be weaned – wage earners, farmers, civil service servants, Texas oil millionaires and Maine potato growers, newspaper and magazine interests, shipping lines and railroads, even some educational and religious groups, as well as a diversity of business and trade groups.

These groups here in America, eager to draw the milk of subsidies and special favors – a mail rate benefit for newspapers or a tariff to protect wool, huge mail subsidies for airlines, higher freight rates for railroads, tax exemptions for complete business enterprises under educational and religious control – these are the fat and happy and unweaned pups which draw energy from the mother wolf, handicapping her in her battle with the bear.

In the background of this cartoon could be a series of little flashback sketches – some people in funny, old fashioned clothes climbing from a quaint little ship onto Plymouth Rock; Washington counselling his aides at Valley Forge; a tall, gaunt man on an improvised stage at Gettysburg pronouncing simple words sincerely . . . "that this nation, under God, shall not perish from the earth."

We'd try to convey in that cartoon the disaster it will be if the American of 1950, just for a fast buck, sells that whole wonderful heritage – and his nation's very life blood – down the river. For today there seems no other thing anywhere near as important as the one job of protecting America from her enemies. All our little personal and group interests should be forgotten in this hour of greater need. It is a shaming commentary on Joe Blow, American of 1950, that the fast buck obfuscates his vision and his patriotism.

• • •

Norman Myrick's very able story three months ago, "Nightmare in Rhode Island", continues to gnaw at my mind. If you failed to read it, turn back to the January issue and read it now. As a newspaperman by training and profession, it seems to me that the Providence affair is a frightful indictment of newspaper practices.

My childhood was divided between two environments, the family farm with its 40 Guernseys, and the country newspaper plant which father bought because mother's health made it necessary to move to town. It was a printer's-ink-and-milk diet of learning; I milked my first cow and set my first stick of type the same summer. My only departure from newspaper work was school work – with a major in journalism. And we still had the farm, and the Guernseys. Followed 25 years of newspapering, with the accent on agriculture, on dairying.

This brief biography is only to explain why the Providence clash between milk and printer's ink hit me so hard. And it justifies a personal reference to another kind of handling of dairy news.

I was covering city offices for a daily paper of considerable size and repute and went into the health department's back office to have a leisurely cigarette with the city sanitary engineer. He had a big black book, where he recorded current tests on milk, city water, pollen count in the summer, etc. I leafed through the book and was amazed to see recent listings of bacteria counts for one dairy running to 400,000, then 550,000, down to 250,000, again up and this time to 680,000, followed by a drop to 50,000. Back home we had sold fluid milk to a local plant for bottling for 25 years, and I knew

There has been a bit of friendly rivalry between the Plain Talker and the Editor on the question of weather. The depth of North Dakota snow, the negative characteristic of North Dakota temperatures where, it was implied, it takes a rugged breed to survive were contrasted with the enervating balm of Connecticut's June in January. It is, therefore, with no little relish that we record the fact that on Easter morn, April 9, 1950, the Connecticut hills were suddenly covered with six inches of quite January-ish snow.

R.G. WRIGHT

has can washing news

WRIGHTDRAULIC DRIVE

shorty

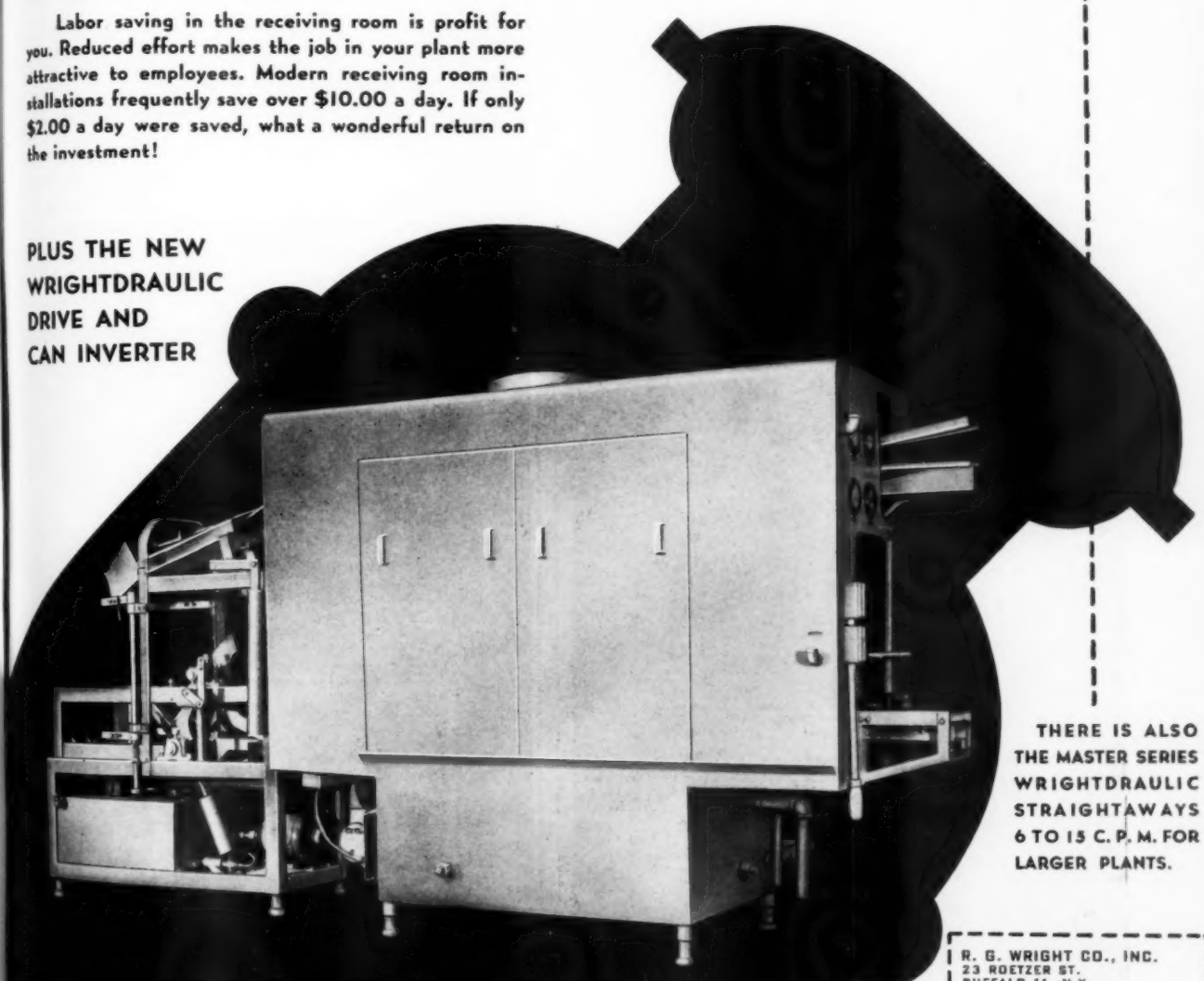
4 TO 5 CANS PER MINUTE

STRAIGHTAWAY CAN WASHER

The Wright "Shorty" makes available for the first time to medium size milk plants those features essential for really clean cans. Included are all the treatments generally advocated by recognized health authorities. Equally important are the advantages of the Wrightdraulic Drive and Can Inverter, with which the "Shorty" is now equipped. This means really big plant operation in a limited space at a surprisingly low cost.

Labor saving in the receiving room is profit for you. Reduced effort makes the job in your plant more attractive to employees. Modern receiving room installations frequently save over $10.00 a day. If only $2.00 a day were saved, what a wonderful return on the investment!

PLUS THE NEW WRIGHTDRAULIC DRIVE AND CAN INVERTER



THERE IS ALSO THE MASTER SERIES WRIGHTDRAULIC STRAIGHTAWAYS 6 TO 15 C. P. M. FOR LARGER PLANTS.

CHECK THESE BIG MACHINE FEATURES

★ Two pumps — Two Tanks.
★ Exclusive Spray Jets.
★ Automatic Cover and Can Control.
★ Automatic Temperature Regulators.
★ Heavy Gauge All-welded Construction.

All these features are standard on this washer

R. G. WRIGHT CO., INC.
23 ROETZER ST.
BUFFALO 11, N.Y.

PLEASE SEND BULLETINS:

☐ SHORTY 4 TO 5 CANS PER MINUTE
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NAME _____

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R. G. WRIGHT COMPANY, INC., BUFFALO 11, N. Y.

XUM

vaguely that when you got above 0,000 to 25,000 you began to look around to see what was wrong. And that 680,000 count sounded like a three-alarm fire in my mind. I knew a little about the milk business, and I knew news when I saw it.

So I went with the book to the sanitary engineer, pointed to the entries, and said, "O.K., brother – what gives?" He hesitated for a while, then told me the story. Seems this one dairy was just having trouble – and they didn't know where it was. We had quite a talk. The health department man was very concerned about publicity; in fact he ran on at length about the calamitous effect of a "milk scare" in the paper. I told him to keep his shirt on and his nose clean – that we were not running any story – yet – but that we would continue to watch the situation closely and critically. I figured that if he hadn't shaken off his public employee complacency and really got into high gear on this investigation, my knowledge would sort of turpentine him into it.

I told the whole story to my editor – –in writing. I told him how the dairy was practically wrecking their plant taking apart every pipe and joint and machine to find the trouble. I told how outside experts had been flown in, at considerable expense, to aid in the job. I told how state health department men were cooperating with the municipal health boys in the one big job of detection and cleanup.

In my note to the editor I reviewed the tolerances allowed by municipal ordinance – 30,000 for Grade A pasteurized – and noted that the bacteria count was a general indication of purity and safety of the fluid milk. I told him the health people believed the high count came from thermophylic or thermoduric bacteria which were not controlled by pasteurization but, on the other hand, were not apt to be highly dangerous. In other words, it definitely was not a life-and-death matter which the newspaper should clarion in 60-point headlines to protect the populace.

I tried to get my viewpoint into that note to my editor – that a city's milk supply was somewhat like a lady's virtue – if once you lifted just a questioning eyebrow or pointed an accusing finger, years of reassurance could never erase the blemish, never make the thing right again in the public's mind. I assured my editor that all that could be done was being done – by public officials, by plant men themselves, and by outside experts.

They traced the cause, after two weeks of day-and-night investigation, to one herd, and finally to the cheesey rubber parts of a milking machine which simply hadn't been cleaned often enough or properly. The newspaper was in daily touch with the situation. Because of my own background I was assigned to it, and took especial interest in it. My editor was one of the first to be told when the cause was located and corrected, and from then on we watched the bacteria counts drop back to normal.

• • •

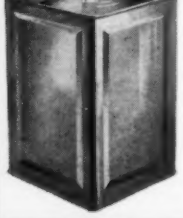
The newspaper never printed a word on the whole thing – in fact this is the first published reference to it. Yet I'll stand before a jury of newspapermen and insist that the

(Please turn to Page 85)

IT PAYS TO USE R&M QUALITY FILTERS

WRITE: REEVE & MITCHELL *Division of Schwartz Mfg. Co.*
300 SPRUCE STREET • PHILADELPHIA 7, PA.

STERN
A GOOD CAN NAME
SINCE 1901



THE STERN
5-GALLON
SINGLE TRIP CAN
for
FRESH MILK
and
ICE CREAM MIX

STERN CAN COMPANY, INC.
183 ORLEANS STREET • EAST BOSTON 28, MASS.

PORTRAIT OF A DAIRYMAN

(Continued from Page 8)

mittee he has had an active part in developing a sound labor relations policy.

Mr. Merrill is an able administrator as the healthy state of Clover Leaf Dairy will demonstrate. That he has the larger point of view his activities in association work attest. But more important is the fact that back of these activities is sound, logical thinking. "I am as diametrically and as completely opposed to governmental regulation of the milk business as I am to governmental regulation of free speech, the press, or a man's right to worship as he sees fit. It seems to me that we must discontinue the drug of governmental regulation which we sometimes believe will make the running of our business less difficult. A good place to start is in our own back yard."

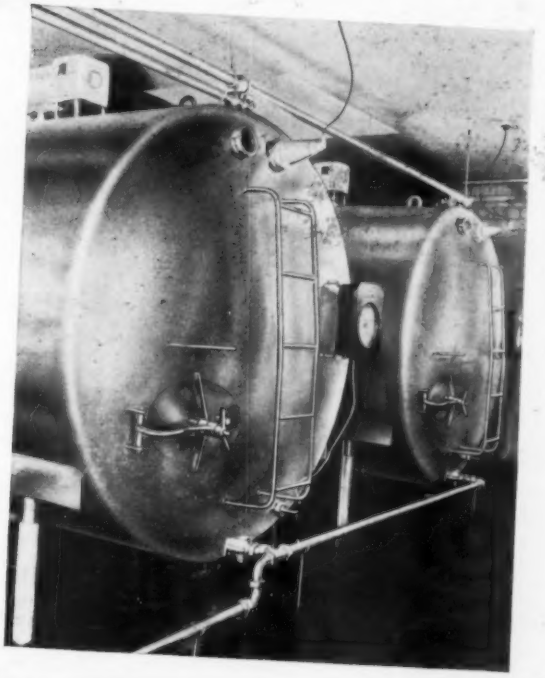
On the great problem of labor Mr. Merrill wastes little time in coming to grips with the essence of the question. "It seems to me", he says, "that better labor relations can be achieved more readily through the feeling in the hearts of the men rather than through the tendency toward regimentation which has existed during the past few years." Next to the cost of raw products Mr. Merrill sees labor taking the greatest portion of the sales dollar. "More economy can be achieved in an operation by good labor relations than through any other channel", he says. "If the employee feels that the attitude of management is right, he will do more toward helping management reduce costs than can possibly be achieved through detached and organized regimentation of their relationships and efforts."

Quality and selling, no less than labor, demand clear thinking. Quality products, attractively packaged, delivered to the consumer in ideal condition is the well-known path to increased consumption of dairy products, says Mr. Merrill. Good public relations plus a sound advertising and selling program based on the quality should turn the increased consumption trick. "Fortunately", says Mr. Merrill, we have the National Dairy Council which, in my judgment contributes more toward the end of getting sound and reliable information to the public than all other individuals and collective organizations combined."

"Adequate platform inspection is the safety valve" which insures that the raw product will arrive at the receiving platform in good condition, Mr. Merrill contends. Quality improvement starts on the farm, he points out but declares that "When the products enter our plant we have the factors contributing toward good quality control well established. If employees will do things as instructed and know what they should do in processing and delivering these products to the consumer, then we have reached the point of diminishing returns on improvement. Most of us may not achieve this end, but the way to the end is clear."

A man is as he thinks. There is no fat on Mr. Merrill's thinking. He sees problems in the light of the facts, the logic of his conclusions is inescapable. It is the kind of thinking that one associates with the desert and the implacable logic of a hard, beautiful land. We have endeavored to write about the man but who can say where the man begins and the land ends. Each is a part of the other. Each has left an imprint on the minds and hearts of men.

Experience in ACTION at MATTHEWS-FRECHTLING



For best quality, Matthews-Frechtling Dairy Co., Cincinnati, Ohio, wanted to cool incoming raw milk to 34° F. and hold at that temperature. To do this they selected Mojonnier Cold-Wall Tanks. Here is another example of Mojonnier *experience in action* . . . one of thousands of seam-welded, direct-ammonia cooling equipment installations. Cold-Wall Tanks were introduced by Mojonnier 10 years ago, and since that time have been furnishing fast, safe, dependable cooling in plants like Matthews-Frechtling everywhere. For complete details, write:

MOJONNIER BROS. CO., 4601 W. OHIO ST., CHICAGO 44, ILL.

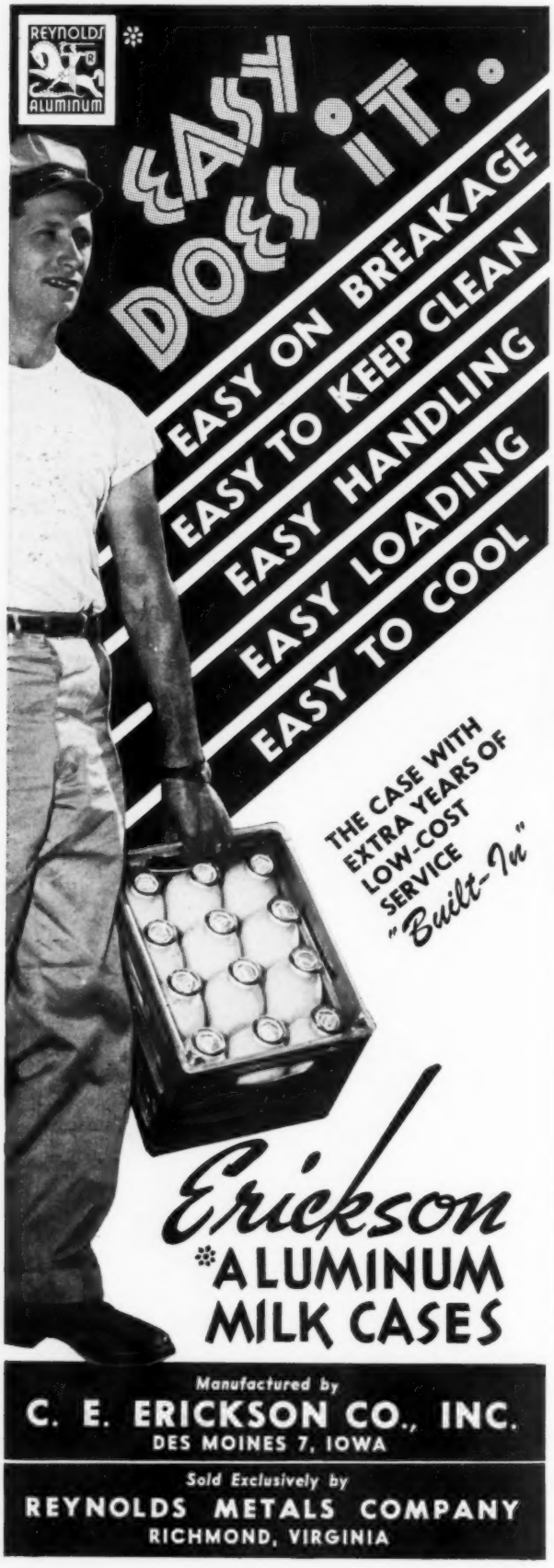
Mojonnier

STAINLESS STEEL

COLD-WALL TANKS

Other widely used Mojonnier engineered equipment for the Dairy Industry includes:

BOTTLE, CASE, CAN, CARTON CONVEYORS • MILK TESTERS • TUBULAR HEATERS • COMPACT COOLERS • TUBULAR COOLERS • ZONE-CONTROL VATS



June Promotion Cooking

Elaborate Plans For Super-Duper Sales Push Are on the Fire — Taste and Price Are Theme

A million dollars worth of publicity and advertising through press, radio, television, magazines and public platforms will provide sales opportunities for the dairy industry when it begins its 14th national observance of June DAIRY MONTH on June 1.

The Sponsor Committee, with E. W. Tiedeman, General Manager of the Central Dairy Sales Co-op., Chicago, as National Chairman, is building this year's merchandising and public relations campaign around the theme, "Enjoy

June Dairy Month Planning Committee

Delicious Dairy Foods—Your Best Food Buy". Designed to stimulate increased consumption of dairy foods at a time when milk products are abundant, the nationwide campaign aims:

1. To increase the sale of dairy foods.
2. To promote the appetite and economy appeal of dairy foods.
3. To hold and expand the market for dairy foods.
4. To promote public relations for the dairy industry and its products.

Highlighting the June DAIRY MONTH theme will be a colorful 17" x 22" poster, portraying in a taste-appealing manner, butter, cheese, ice cream and milk. The dairy industry and allied industries will find these attention-getting posters invaluable in their own promotional campaign during the 30 days in June. There will also be available 8 x 10 glossy prints of the poster, in black, and a two-column newspaper mat of the poster which the dairy industry and the allied industries as well as the press may use to publicize the million dollar campaign.

The poster is the only merchandising material developed by the Sponsor Committee this year for distribution through the Headquarters' office. In making this decision the Committee is urging the dairy industry to purchase and use the official campaign poster which can be obtained through the Headquarters' Office, National Dairy Council, Chicago.

As in previous years a June DAIRY MONTH Publicity Kit will be available for use by the press, radio, state

chairmen, Dairy Council Directors as well as state association secretaries. These Publicity Kits contain endorsements of June DAIRY MONTH from Charles F. Brannan, Secretary of Agriculture, U. S. D. A.; Philip E. Nelson, Director, Dairy Branch, Production and Marketing Administration, U.S.D.A.; samples of proclamations which may be used by state governors, suggestions for promoting June DAIRY MONTH, newspaper releases, radio spot announcements, radio scripts, speech suggestions, and dozens of other ideas which can be used by the dairy industry to promote dairy foods.

"If there was ever a need for stimulating greater use of dairy foods, it is now," said Mr. Tiedeman, whose committees are in the midst of merchandising and public relations plans to harness every conceivable media in the interests of DAIRY MONTH. "For some time we have all been experiencing problems as to how to handle milk surpluses. June, when cows increase their milk production, there's greater need for more selling. This calls for more publicity, more advertising, more food programs on radio and television, more food articles in national magazines, and more talking at community and public gatherings to increase desires for more dairy foods and thus stimulate the urge to buy.

"Each year the June DAIRY MONTH campaign acquires greater momentum to do this very job. I am urging industry as never before to tie in with their publicity, advertising. radio and television programs so that the nation's 150 million men, women and children will consume greater quantities of milk, butter, ice cream and cheese during June and thus get into the habit of following that same pattern the other 11 months of the year. All-out merchandising and promotion like this should go a long way to make government subsidy purchases of dairy foods unnecessary. June DAIRY MONTH is your campaign, use it to move your products to the family tables."

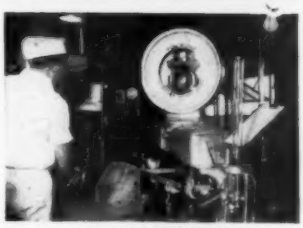
Milton Hult, President of the National Dairy Council, is serving as Chairman of the National Program Committee. Working under him are committees on industry participation and public relations.

Neal D. Kelley, Assistant to the President of NDC, is serving as Chairman of the National Committee for Industry Participation. Members are: Gardner Cole, Swift and Company, Chicago, representing American Butter Institute; Roy Ricksham, American Dairy Association, Chicago; William Stinson, Cherry-Burrell Corporation, Chicago, representing Dairy Industries Supply Association; George W. Hennerich, Ice Cream Merchandising Institute, Washington, D.C.; Don H. Bromley, Bowman Dairy Company, Chicago, representing International Association of Ice Cream Manufacturers; W. A. Jimison, The Borden Company, Chicago, representing Milk Industry Foundation; W. A. Gordon, National Creameries Association, St. Paul, Minn.; Anthony G. Kainz, Kainz Dairy, Chicago, representing National Association of Retail Ice Cream Manufacturers; William Shanks, Kraft Foods Company, Chicago, representing National Cheese Institute; Charles Holman, National Milk Producers Federation, Washington, D.C.; Edwin H. Davenport, New England Dairy and Food Council, Boston, Mass., representing Affiliated Dairy Council Units; Claude Snider, National Dairy Council, Chicago.

Scales today provide vital accounting data that *directly affects your costs* . . . and *profits* . . . and *customer goodwill!* That's why it's so important to have TOLEDO accuracy at every weighing point!

Your weight records originate at many points throughout your dairy . . . supplying basic information that affects your inventories, receivables, payables, and the final profit figure!

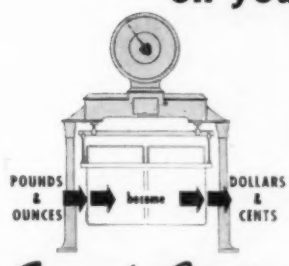
Toledo has the scales to start your cost records *right* . . . rugged Toledo Dairy Scales designed to overcome moisture hazards and *guard your profits* . . . with accuracy, speed and dependability. Send for bulletin 2020 on Modern Weight Control. Toledo Scale Company, Toledo 12, Ohio.



MILK RECEIVING

BUTTER PRINTS

MILK becomes MONEY on your SCALES!



Errors made at the scale stay wrong forever. There is no chance to recheck; either because the milk (or other dairy product) has been shipped or has lost its identity in the general stock. You've got to be *right* — weigh it right with Toledo!

Guard Costs with

TOLEDO

All the Way

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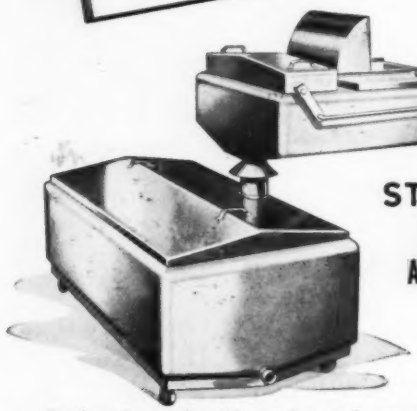
STOELTING

ADVANCED EQUIPMENT

★ Modern Design
★ Finest Stainless Steel Craftsmanship
★ Plant Layout and Engineering



STOELTING
WEIGH CAN
AND RECEIVING
TANK

Designed to simplify and speed up milk handling and weighing. Custom built in a variety of capacities. Also available in "double" models for receiving and weighing milk and cream. Finest of stainless steel construction.

STOELTING
"Flavorite"
PASTEURIZER

Dry steam heating assures uniform heat transfer and flavor-protection to milk or cream. Flooded cooling quickly reduces temperature. Deluxe or standard models from 20 to 500 gallons capacity. Built for long years of trouble-free service. Write for details.

Complete Equipment
For
Modern Milk Plants

STOELTING BROTHERS CO.
Manufacturing Engineers for the Dairy Industries
KIEL • WISCONSIN

New Dairy Council Units

Wyoming, Virginia, and Iowa Groups Organize to Increase Consumption of Dairy Products

To increase consumption of dairy foods in Wyoming, producers and processors have turned to the Dairy Council organization for its research and educational program with opinion-forming leaders in the state. Known as the Dairy Council of Wyoming, the organization recently established headquarters at Casper, with Mabel G. Buttars, nutrition specialist, as its director.

Affiliated with the National Dairy Council, the Dairy Council of Wyoming appointed Val Christensen, Cheyenne, as its president. Other officers are: E. O. Trowbridge, Saratoga, vice president; S. H. Willey, Casper, secretary-treasurer. In addition to the officers, other dairy leaders who serve with the officers as members of the Board of Directors are: Frank Flynn, Worland; A. E. Olsen, Torrington; H. F. Newton, Sheridan; and R. E. Kilmer, Lusk. Milton Hult, president of the National Dairy Council, stated the Dairy Council of Wyoming represented the 55th Dairy Council market in key areas from coast to coast.

Miss Buttars is a graduate of the University of Utah at Salt Lake City with a bachelor of science degree in home economics. Her graduate work included study at the University of Idaho in Moscow, Utah State College at Logan, and the University of California at Berkeley. A member of the American Home Economics Association, she will direct the promotional program through education in the use of dairy foods. She will work with schools, professional groups, health departments, industrial organizations, women's clubs, and other similar groups.

Virginia Raises the Flag

Virginia has joined the ranks of other key states in the country to organize a Dairy Council to cover the milk markets in five cities—Staunton, Waynesboro, Lexington, Harrisonburg, and Fredericksburg. This marks the 57th Dairy Council Unit in major cities from coast to coast designed to stimulate increased use of dairy foods. Its headquarters are at Staunton.

Claude J. McLain, the newly appointed President of the Board of Directors, has announced that Mrs. Lena E. Bowman, has been appointed Director of the Dairy Council Unit. Mrs. Bowman is a graduate of Madison College of Harrisonburg with a B. S. degree in Home Economics. Her experience includes serving as a grade school principal, home demonstration agent, and school teacher. She also has had extensive experience in 4-H Club work.

Other members of the Board of Directors are H. H. Scott, Harrisonburg, Vice President; Charles N. Clarkson, Staunton, Secretary-Treasurer; C. J. Ashley, and Howard A. Spangler, both of Harrisonburg; R. S. Hartman and A. F. Weaver, both of Waynesboro; F. H. Leistra, Staunton; George E. McComber, Lexington; and M. M. Sterrett, Brownsburg.

Producers and distributors of dairy foods in Waterloo and Cedar Falls, Iowa, have organized a Dairy Council

LENA BOWMAN

CECILE HABBEN

Unit. Headquartered at Waterloo, it is being directed by Miss Cecile F. Habben, a nutrition specialist.

President of the Board of Directors of the newly organized Dairy Council is Dale Murphy, with Antone Jessen, Vice President, Raymond Cross, Secretary, and William Humby, Treasurer, all of Waterloo. Other dairy executives serving on the Board are T. J. Anderson, Cedar Falls, and L. E. Mether, La Porte City.

A graduate of Iowa State College with a B. S. degree in Home Economics, Miss Habben has taught various subjects in home economics for three years in secondary schools in Iowa. In her teaching activities she has used material from the National Dairy Council to supplement her class work on health and nutrition. Miss Habben is a member of several professional home economics organizations. She will work with schools, professional groups, health departments, industrial organizations, women's clubs, and other similar groups.

●

Sealright Names E. A. Watters

Sealright Co., Inc., announces the appointment of Edmund A. Watters as District Manager, South Central States, headquarters St. Louis. Mr. Watters has been Sealright representative in the Carolinas and southern Virginia since September 1945 when he was discharged from the U. S. Army as Major.

Mr. Watters was born in Flandreau, South Dakota, 37 years ago. He is a graduate of North Carolina State College, Raleigh, in 1936.

Prior to the war Mr. Watters had successful selling experience, becoming Chicago Sales Manager for a metal products company.

He was commissioned Lieutenant, U. S. Army, in February 1942. In line with meritorious service in combat in European campaigns, Mr. Watters advanced to the rank of Major. He is the holder of the Bronze Star, Purple Heart, and European Theatre Medal with eight battle stars.

Soon after his release by the Army on the point system in September 1945, Mr. Watters joined Sealright and was assigned the famous Carolinas, southern Virginia territory. Mr. Watters' predecessor in that territory is Mr. R. Reid McNamara, who is now Sealright Sales Manager.

Mr. Watters has already taken charge in his District which includes the sales territories centered at Indianapolis, Memphis, St. Louis and New Orleans.

DON'T SWEAT OVER WET PLANT DETERIORATION ...RUST OR FUNGUS

STOP THEM WITH AMAZING DAMP-TEX ENAMEL

The Damp-Tex system of painting stops rot, rust, bacteria and fungus growth. Puts a porcelain-like finish on wet or dry wood, metal, concrete and plaster with equal ease and efficiency. Damp-Tex resists steam, 2% caustic solution and lactic acid. Comes in white and colors. Used in over 8,467 plants. Send for details of our trial offer "C"

THE CREAMERY PACKAGE MFG. CO.
National Distributor of Damp-Tex Products to the Dairy Industry.
General Office: 1243 W. Washington Blvd., Chicago
Branches in eighteen principal cities

Canadian Manufacturer: Standard Paint & Varnish Co., Windsor, Canada

XUM

Milk in holding tank is measured by means of an especially calibrated measuring stick. Measuring is done at the farm and producer is paid on the basis of that measurement.

Tank TruckPick-Up at the Farm Holds Quality Promise

South Carolina and Connecticut Projects Gain Producer Favor and Encourage Production of Better Milk

IT'S NOT QUITE true to say that tank trucks are picking up milk from the farms all over the place. However, taking the story of Edisto Farms in Columbia, South Carolina and the tank route operated by Bryant and Chapman of Hartford, Connecticut one gets the impression that the boys are certainly giving the thing a whirl.

The Bryant and Chapman operation is an eight stop proposition which is just about ending its second year. According to the producers results have been gratifying. According to Bryant and Chapman officials the company is well pleased with the way in which the project is working out.

Stainless steel holding tanks have been installed on eight farms. The tanks range in capacity from 150 gallons to 300 gallons. Producers were filling the tanks pretty close to capacity. The tanks are, of course, refrigerated. Most of them contain a direct expansion surface cooler over which the milk is poured direct from the milking machine pail. Quick cooling has been the result with temperatures of 38° to 40° reached within ten minutes after milk has entered the tank. Biggest difficulty with this type of tank has been a cooling problem unless there is a sufficient volume of milk in the tank to take advantage of a major portion of the area of the surface cooler. An agitator equipped with both automatic and manual control keeps the milk circulating but even with half a tank full of milk a large portion of the cooling surface is not in contact with the milk. Solution to this problem has been achieved with the installation of a cold wall holding tank. Only one tank of this type is in operation at present but it has licked the cooling problem.

Tanker in process of making a pick-up at Home Farm at Denmark, S. C. The same procedure is followed in every pick-up stop, with a maximum of efficiency in getting the milk aboard for delivery to the processing plant.

A sixteen hundred gallon tank truck driven by a licensed weigher and sampler does the collecting. The driver takes butterfat samples daily at the farm from the holding tank and a sample for bacteria count each week. The quantity of milk in the holding tank is determined by means of a metal measuring stick calibrated for each tank.

Milk is pumped from the holding tank into the truck by means of a pump mounted on the rear end of the truck. A stainless steel pipe plus a length of standard brewers hose connects the holding tank to the truck. It takes from twelve to fifteen minutes for the pump to empty the holding tank.

Cleaning the holding tank is done by the producer. This operation takes

XUM

approximately fifteen minutes of his time. One producer reported that it took him just twelve minutes to do the cleaning job.

Farmers were all enthusiastic with the system after two years of living with it. Main features which they liked were the method of weight determination and butterfat sampling. Other features were the elimination of can handling and the additional space which substitution of the holding tank for large cooling tanks provides.

Quality of milk has been improved through use of the system. Although Bryant and Chapman field supervisor Emerson Sartain is quick to point out that the tank truck system is not a short cut to quality and if anything requires even more meticulous attention to good sanitary practice on the part of the farmer, the use of the tanks has apparently served as a spur to producing better milk. Possibly the fact that the producer stands to lose a tank full of milk rather than just a can if something goes wrong is responsible.

Closely resembling the Bryant and Chapman system but with the slight variations that one would expect to find between two operations a thousand miles apart is the six stop route developed by Edisto Farms in Columbia, South Carolina. Biggest difference is the use of cold walled holding tanks at each of the six stops. Also the holding tanks have a round bottom instead of the angular sloping bottom on the Bryant and Chapman route. The Edisto tanks were made by Mojonnier while the Bryant and Chapman tanks are Creamery Package products.

A newspaper in Isreal reports: "One of our readers is in the habit of leaving a jug outside his door every evening for the milkman to fill the next morning. One day recently, while pouring his milk into another container, the customer discovered a 10 mil piece at the bottom of the jug. Thinking that the milk man had accidentally dropped the coin while pouring out the milk, he left it in the jug that night, with a note. The next morning, the 10 mil piece was back again in the milk and another note beside it saying 'it's your change.'"

The cold milk is transferred by pump to a 2,000 gallon tanker for delivery to the Edisto Farms Dairy pasteurizing plant in Columbia. The tanker makes a daily run of about 133 miles. As noted in the accompanying "Tanker Route Report," at two farms the pick-up is made every other day, so that milk is picked up at five farms every day. Incidentally, there is no significant difference in bacteria count after two days holding on the farm.

Milk Cooled to 38° F.

On all farms milking practice is the same. The cows are milked in shifts in milking barns or sheds. The milk is poured from the milking bucket through a strainer and into the cold-wall tank. As soon as enough milk has accumulated to cover the agitator, the agitator motor and compressor are placed in operation. On the first milking, the milk is cooled to 50° F. almost immediately, and cooling continues until a temperature of 38° F. is reached. On subsequent milkings, the temperature in the tank

THE NEW Kendall RETURNLINE CAN WASHER

Check THESE FEATURES

FEATURING A 150° DUMPING ARRANGEMENT

★ Partition separates cleaning from sterilizing stations.

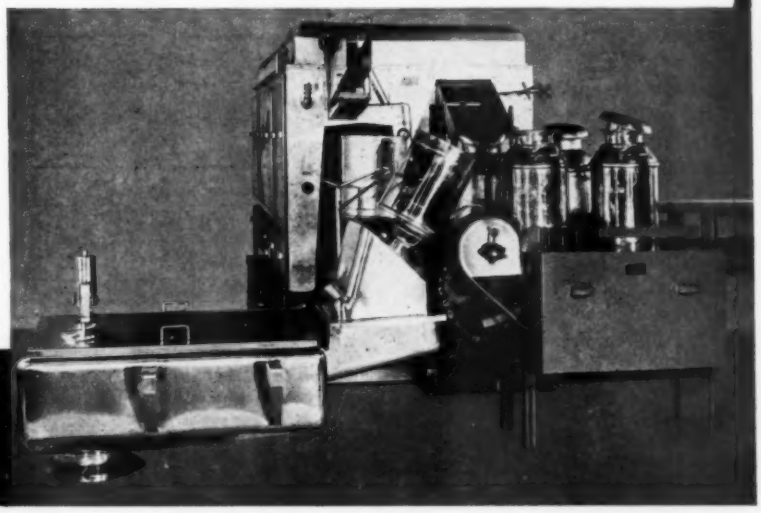
★ Saves costly space.

★ Provides maximum visual inspection for incoming AND outgoing cans.

★ Eliminates necessity for separate reject conveyor.

★ Completely accessible for cleaning and adjusting.

★ All controls within easy reach.



KENDALL-LAMAR CORPORATION
POTSDAM, NEW YORK

This picture shows tanker driver making out receipt while milk is pumped into tanker. Shown is the 400 gallon tank on River Farm in South Carolina.

does not rise above 45° F. due to the tempering effect of the cold milk in the tank from the previous milking.

A thermostat automatically stops the compressor when the milk is cooled to the required temperature of 38° F. There is no further handling of the milk on the part of farm personnel.

A milk pump with piping for transferring the milk is carried on the tanker.

At each farm the amount of milk in the producers cold-wall tank is ascertained by measuring the depth of the milk with a stainless steel ruled measuring stick. A tabulated chart posted in the milk room shows the exact gallons in the tank for any given depth.

The tanker driver fills out a receiving ticket in duplicate recording the gallons of milk in the tank. The milk is paid for on this basis.

The milk is then pumped into the tanker.

The driver then cleans out the pump and piping and places these parts back on the tanker. About 21 minutes is required for each pick-up on a "Cab to Cab" basis. Ten gallons of chlorine sterilizing solution is placed in the tanker at the start of the trip. This sloshes around the tank interior and is drained out at the first stop.

Mr. R. P. Kapp, co-owner of Edisto, is quality minded, and carries on a continuous quality control program with all producers. A premium of 12c per cwt. is paid for milk with a count of under 50,000 bacteria per c.c. It is expected that it will be possible to regularly obtain counts of from 4,000 to 10,000 per c.c. under the new system.

Other Advantages Gained

As the milk is transported in bulk in a well insulated tank, there is a minimum temperature rise during transportation (about 1° F.).

The system is a labor saving boon to the producer. The handling of both full and empty cans is eliminated.

The producer receives maximum return for his production. Previously, stickage and other losses came out of the delivered weight. Such losses are now nil.

On one farm the tanker driver commonly makes the pick-up in the absence of the producer or his representative. Timing of the pick-up is not critical.

Edisto charges 20c per cwt. for the tanker pick-up service. This covers labor, gas, repairs and depreciation on the tanker. Former hauling charges were greater. As the tanker is back from the route at noon it is available for other hauling contingencies which arise from time to time.

TANKER ROUTE REPORT - JANUARY 26, 1950

EDISTO FARMS DAIRY, COLUMBIA, S. C.

Station	Address	Miles	Time Ar.	Time Lv.	Milk Pump Out Time In Minutes	Total Time At Farm	Rated Capacity Producers Tank	Gals. Milk in Tank	Number Cows Milked
Edisto Farms Dairy	Columbia, S.C.	0		6:40					
Duncan Farm	Denmark, S.C.	54	8:10	8:30	5	20	400	245	75
Homo Farm	Denmark, S.C.	56	8:34	8:54	7½	20	400	368	125
River Farm	Denmark, S.C.	60	9:01½	9:23	7	21½	400	310	108
Livingston Farm*	North, S.C.	88	10:06	10:28	1	22	60	60	15
E.B. Mack Farm	North, S.C.	93	10:40	11:01	4½	21	300	212	74
Edisto Farms Dairy	Columbia, S.C.	123	11:56						
W.E. Allison Farm*	Route 4 Columbia, S.C.	285	Every other day pick-up of gals.				300		50

* Milk picked up on alternate days.

XUM

LET'S TALK ACCOUNTING

(Continued from Page 22)

they are a means of determining class prices (adjusted from basic class prices to the test of the classified milk. Basic class prices are for some so-called standard or average test, such as 3.5%, 3.7%, 4.0%, etc.). Second, butterfat differentials are used to adjust dealers' announced prices, in an individual dealer pool, to the basic test price, and for determining net pool obligations based on dealers' tests in a market wide pool. In distributing pooled milk values to individual farmers of course the dealers' utilization-based prices are adjusted for each producer depending on the test of the milk he delivered. The *relationship* of these butterfat differentials to each other in any given order is a matter of prime importance. The "valuation" differential is of most concern to the dealers, of course, since the price of butterfat is determined thereby. The "payout" differential is of most importance to the farmer, since it determines his respective share of a pool.

10. The various classifications used in an order must be carefully weighed. For instance, class I milk is usually fluid milk used for human consumption, and takes the highest price. Cream, cheese, etc., may all be lumped into class II at a somewhat lower price. If a market's structure is basically class I, the lower class products are of relatively little importance in a dealer's pool, but if a surplus problem exists, or if a good market exists or can be built up for milk products other than fluid milk and cream, milk and skim drinks, the setting up and pricing of lower class milk can often be the difference between a profit or a loss for the dealer.

11. Premium structures must be carefully thought out. Orders may provide for premiums to producers for Grade A milk, for other premium milks, for nearness to a market, for level production, etc.

12. After all else is hashed out and an order promulgated, a producer referendum is held to see if farmers want it, and the dealers are asked to sign a marketing agreement accepting the order. Whether the dealers sign or not is of little moment in the final determination of whether an order or amendment shall or shall not be. If the farmers want it, and the dealers don't, the Secretary of Agriculture will order it put in effect anyway. But if the dealers sign the marketing agreement, it has the force of a contract, and closes to some extent possible future objections. It is usually more advisable to let an order go in by fiat if necessary rather than sign it and thereby accept all its provisions.

The foregoing points are not at all intended to be all-inclusive. It must be remembered that a marketing order sets up full control over one very very important function of a milk dealer: PROCUREMENT OF MERCHANDISE. Every effort must be made therefore to insure as much as possible that a marketing order, if it must be lived under, be as fair to all parties as human ingenuity can make it.

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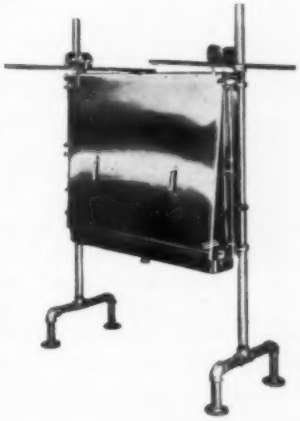

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Progress and Disaster Talks Rouse Boston Convention

New York Price War, Industry's Future Make Yankee Gathering One to Remember — Attendance Record Set

NEW ENGLAND milk dealers gathered at Boston's Hotel Somerset, last month, to mouth some old platitudes and also to bang out some new ones. Leading off with Kline Hamilton, president of the Milk Industry Foundation, the convention got away to a good start and never let up.

The usual collection of moth-eaten generalities that characterize conventions were seriously challenged by some fresh thinking interjected by E. O. "Bud" Mather, Dellwood Dairies, Yonkers, New York, Kline Hamilton, and a bewhiskered dynamo by the name of Alexander Magoun, president of Human Relations, Inc., a Boston organization.

Mr. Hamilton teed off with the remark that the trouble with the milk business was that you had to be around too long to be of any use before you learned enough to be of any help. From there on out he laid it right on the line for his Yankee listeners.

Reform Begins at Home

"If we believe in free enterprise," he said, "we need to practice it in our own back yard." The public believes in and wants a system of free enterprise, he declared, but the public also believes that our present system can be improved. Government regulation should be reduced to a minimum, he said, and outlined four necessary steps to achieve this goal. "We must put our own thinking in order, must develop good relations with the public, must strive for progressive management, and we must sell our story." Real statesmanship in industry, mature bargaining, thinking on the basis of facts and not emotions were considerations that the speaker emphasized. Doing a little well deserved pointing, Mr. Hamilton called the industry's attention to the fact that a portion of its troubles could be laid on its own doorstep. "You can cut your own throat as well as your competitors' with too sharp a pencil," he said.

Mr. Hamilton called for a sound marketing program, some reclassification of the anti-trust laws, an overhauling of the health laws so that they do not act as trade barriers, a wider flexibility in government milk marketing orders, and a higher development of the business man's sense of responsibility for the system and the society in which he operates.

Pattern for Disaster

Mr. Mather, who appeared on the program after Mr. Hamilton, was more specific but no less stimulating than Mr. Hamilton. Carefully and concisely Mr. Mather unfolded the bitter story of the price war and political harassment that has brought the world's largest market close to the brink of disaster. "Don't let it happen here," he urged as he described the combination of political demagogery and deplorable marketing practices that have reduced the milk business in New York from a sound financial basis to a bewildering swamp of staggering losses.

Selling and merchandising sessions plus an equipment discussion were the main features of the periods devoted to particular subjects. A panel discussion of sales gave some promise of turning up new ground but, like most such efforts time was short and no one subject was fully developed. The sacred cows were left on their pedestals and the ancient shibboleths were given their annual dusting. Charles Herlihy of Whitings did describe a fairly successful venture in selling chocolate milk heated. But although the panel members tried valiantly to stir up some ideas they had three and a half strikes against them before they started.

Short time high temperature pasteurization was the big noise in the equipment session. Clarence Weber, definitely an authority on the subject, got off to a fast start but somehow became bogged down along the way. The net gain in knowledge to the audience was that white metal has been superseded by stainless steel, that stainless steel on stainless steel will "gall" and that there are several types of plates in heat exchangers each having certain virtues and certain faults.

A set of skits put on by the New England Dairy and Food Council demonstrated the work of that organization in New England. The skits were built around a mock school room manned by pupils recruited from the ranks of visiting dairymen. Best cracks in the show were supplied by the teacher who inquired, "Good morning children, Did you all shave before coming to school?" To the question, "What happens to milk when it reaches the plant," a pupil observed, "It's paralyzed."

The Team Is the Thing

Alexander Magoun, who spoke on A Look Inside Human Behavior combined some real knowledge of the barnyard end of the dairy business with a great deal of sound advice on how to get along with people. He described human behavior as a tendency to embrace the things that give pleasure and avoid the things that give pain. The team is the thing, he declared, and added that if any element of the team is removed the team breaks down. He labeled understanding as a two way street. The employee must understand the employer's problems and the employer must understand the employee's problems. Anything that increases the confidence of the man in himself is good he said. He urged his listeners to recognize the fact that differences of opinion are not necessarily evidences of lack of cooperation.

The convention was the biggest that the New England group has ever held. More than six hundred dairymen registered. The entire slate of officers were re-elected. President, Theodore J. Devine; Vice-President, Roger Mallory; Secretary, Paul Cushman; Treasurer, Charles Herlihy; Managing Director, James L. Woodsom; Associate, Martyn B. Kennedy.

Processing Methods, Quality Milk Production Features At Oregon

Iverson, Bryant and Others Spark Top Flight Gathering in Northwest — One of Association's Largest

CORVALLIS, ORE.—The 39th annual meeting of the Oregon Dairy Manufacturers' Association was held at Oregon State College, February 27, 28 and March 1. It was attended by about 450 persons, one of the largest gatherings of an Oregon dairy group in history. Marvin Davidson, president of the association, presided at the meetings.

Iverson Heads the Program

Professor Iverson's talks were outstanding. They dealt with the four branches of the dairy industry, butter, ice cream, cheese, milk. He discussed the continuous manufacture of butter as used in the Wapsie Valley Creamery at Cedar Rapids, Iowa and used lantern slides to illustrate his talk. At present no Oregon creamery is making butter by the continuous method, but some of the large plants are considering installation of the necessary equipment when the process has been shown to be satisfactory and economical.

Professor Iverson felt that several college experimental laboratories should be equipped for continuous butter manufacture in order to help in the testing and development of this new method. His discussion of special ice cream was of considerable interest to the many ice cream manufacturers who were present. They were particularly interested in the method recommended by him for preparing various kinds of nuts, filberts, walnuts, pistachio, for use in ice cream manufacture.

C. B. A. Bryant of Johnson & Johnson, Chicago, Illinois, made a return trip to Oregon and very ably discussed the methods for excluding extraneous matter when producing milk. Victor C. Gault, Director of Industrial and Community Relations, Crown-Zellerbach Corporation, Camas, Washington, during his address at the banquet spoke on "Let's Face the Facts."

R. F. Jessup, Pacific Coast Representative, Chester-Jensen Dairy Company and Manton-Gaulin Manufacturing Company, gave talks on operation and maintenance of homogenizers and he discussed the method of continuous high temperature pasteurization of milk, cream and ice cream mix.

D. C. Lightner, Sales Manager, Creamery Package Manufacturing Company gave a very interesting address on equipment manufacturers' responsibility to the dairy industry. Earl O'Donnell, Chief Technician Klenzade Products Company, Beloit, Wisconsin, discussed in a very interesting and able manner the development and application of acid cleaners.

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XUM

American Dairy Association Votes Three Million Plus For Advertising

Delegates To Chicago Meeting Take Off the Wraps In Move To Whip Surplus Problem — Selling Campaign Outlined

DAIRY INDUSTRY lights went up by several kilowatts last month when members of the American Dairy Association voted to expand their advertising program by an estimated two million dollars. In Chicago's pleasant Hotel Morrison, delegates to the association's eleventh annual meeting approved a motion to set-aside each month a quarter of a cent per pound of butterfat or its milk equivalent. Dairymen see an annual yield of better than three million dollars from this action.

Reason for the unprecedented move of the dairy group was the conviction that government price supports are not the answer to surplus dairy products. "Farmers must solve their own problems", declared C. R. Schoby, Algona, Iowa dairy farmer who was re-elected president of the association. "We've had this surplus problem for twenty years", he said, "and the tendency is to face it in the same old way. The dairy industry should accept the challenge of the Brannan Plan and find a way to help itself."

Seven Billion Pound Surplus

A surplus of seven billion pounds of milk, or about 5 per cent of the total production, was listed by Owen Richards, ADA's general manager, as the major problem. This 5 per cent of the total is responsible for fixing the price of the other 95 per cent he said.

Richards described the market of scarcity under the OPA and the free market after the war when there was a market for "every pound of milk produced". With the loss of foreign markets the domestic situation began to break, Mr. Richards pointed out. "Now there is a seven billion pound surplus", he said. "This surplus needs to be sold. It is a sales job, not a job for the legislators. It needs a sales approach. It should not become a political football."

Richards broke the sales problem down into practical sales objectives. "Pattern your sales program to the family table and it is not such a big problem", he declared. Reasonable objectives, according to Richards, were to increase consumption by a pint of milk per family per month, a quarter of a pound of butter per family per month, a quarter of a pound of cheese per family per month, a can of evaporated milk per family per month, and a pint of ice cream per family per month. "This is the problem that stands between us and profitable markets", the ADA's general manager said. "Sell this surplus and the problem is solved."

THEY SAID IN CHICAGO . . .

Harry Wilson, National Cheese Institute, "The sale of that other product does not make up one half of the decline in butter sales."

Ben Hibben, International Association of Ice Cream Manufacturers, "The ice cream industry has already started to sell that extra pint of ice cream. We'll tie in with the ADA festivals."

Col. Benjamin F. Castle, Milk Industry Foundation, "This is a forward looking program. The quota is neither difficult nor impossible."

J. E. Nelson, Montana, "You can count on Montana dairymen going along with this program. If they don't I'll go back and sell 'em."

Russell Fifer, American Butter Institute, "We're behind you in this program. The industry is really getting sales minded."

President Schoby saw the new plan as "the greatest self-help movement in the history of agriculture". He declared that the expanded ADA program was in the best traditions of American agriculture. "Our agriculture was founded on the idea of self help", he said. He added that any sound program must offer fair returns to producers, an adequate food supply for the consumer, and must not be a drain on the public treasury. Dairymen, he observed, are looking for a plan that will meet the need.

How advertising and merchandising can move dairy products was graphically told by Richard Shapairo of the American Weekly. In a stirring talk, illustrated by slides, Mr. Shapairo showed how local promotion could be tied in with the national advertising envisaged by the American Dairy Association. He demonstrated how retail stores that had taken advantage of the various dairy products festivals sponsored by ADA had experienced phenomenal increases in their sales. Some stores had reported sales jumps as high as 300 per cent. He pointed out how retail merchants could use milk as a superb traffic builder and at the same time reap sound profits. "The investment required of the retailer is small," Mr. Shapairo said, "The turnover is great."

Two Years for Full Effect

Realization of the full return from the new levy on producers will not be achieved for about two years due to the nature of the ADA organization. In some states where ADA funds are collected as a tax and turned over to the association, the law must be changed.

Present, the $1,200,000 advertising budget is spent as follows: About 30% for milk; 30% for butter; 25% for cheese; 10% for evaporated milk and 5% for ice cream.

The percentages will remain about the same under the new budget. However, weekly newspaper ads in about 35 top markets will be added to the current media schedule.

In addition, ADA will seek to recapture the teen-age milk market. Statistics indicate that milk consumption falls off rapidly as children enter their teens. In order to halt this shift away from milk, the association will sponsor a televison campaign aimed at teenagers and persuade them to get back on the milk wagon.

Owen Richards of ADA, put it: "We want to get production to the family tables and not to let it pile up in wasteful surpluses."

MEET THE SECRETARY

BEN EYNON

TO MOST FOLKS Ben means Franklin but to milk dealers in Pennsylvania Ben means Eynon, the Executive Vice-president of the Pennsylvania Association of Milk Dealers.

Ben Eynon came to the milk business by way of the coal fields and the office of Pennsylvania's Commissioner of Motor Vehicles. As he describes it, he veered from the "black road of anthracite" to the "white milky way", about as circuitous a route as one can find.

Motor Vehicles to Milk

Born in Scranton, Pennsylvania sixty-nine years ago Mr. Eynon began his career as an accountant with the Delaware, Lackawanna & Western Railroad. From this job he stepped in Pennsylvania's fast moving political stream as Chief Clerk for the Lackawanna County Commissioners. Seven years later he was called to Harrisburg to serve the Commonwealth of Pennsylvania as Commissioner of Motor Vehicles, a position that he held for fourteen years. During this time he came to be recognized as an authority on traffic problems not only on Pennsylvania but in the nation.

Few milk dealers have forgotten the stormy period of the early thirties. In 1935, with the memory of those turbulent days still fresh, dairy leaders in Pennsylvania felt that the industry needed the services of a diplomat, a man with organizational ability and vision. They found their man in Ben Eynon.

Under Mr. Eynon's guidance the dairy industry in Pennsylvania moved on to firm ground. Both he and the association have chalked up many a score on the credit side of the ledger. One of the outstanding examples of sound thinking is the Pennsylvania Milk Control law. This law, enacted as a temporary measure in 1933 and rewritten into permanent legislation in 1937, has the distinction of standing unchanged longer than any other milk control law in the country.

Growth and Influence

Under Mr. Eynon's management, PAMD's membership has grown from 25 to 639. In cooperation with farm and other organizations he has worked successfully to bring about a much better understanding between the various segments of the industry; has worked with Commonwealth agencies in the promulgation of practical regulations for the industry; was instrumental in securing an experience rating system for unemployment compensation taxing; has had compiled a dairy waste saving and treatment guide (now being printed) to help members comply with anti-stream pollution laws – the first such manual for any industry in the Commonwealth; in 1942 arranged for Pennsylvania State College to sponsor annual dairy fieldmen's conferences; has plans underway for initiating this year an annual series of sales training conferences; in 1937 employed Willis F. Daniels, Harrisburg, as General Counsel for the association – an attorney whose firm's work for the dairy industry since then has won nation-wide recognition; at his 1950 Convention in February, secured membership adoption of a public relations program that is destined to do big things for the dairy industry of Pennsylvania.

Candidate for Governor

One does not find men of Mr. Eynon's caliber at every turn in the road. A long list of community services was capped not long ago when he was a candidate for Governor of his State. But to the men who put milk in bottles and the bottles on door steps, Ben Eynon is at once the fabricator and the symbol of a strong, healthy milk industry. On a solid foundation of clear thinking and energy logically applied he has built wisely and well.

Make Your BUTTERMILK the Talk of the Town

It can give you a bigger profit than any other product.
It can increase your prestige more than any other product.
Write, wire or phone for ideas on production and promotion.

G. P. GUNDLACH & CO.

"Servants to the Dairy Industry"

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XUM

CITY OWNED PLANT

(Continued from Page 6)

informed that such a plant and garage that we propose would cost about $321,000.00; equipment costs together with refrigeration, installed will cost about $145,000.00. About $125,000.00 would be required for a working capital balance. With other incidentals about $992,740.00 would be required or, in other words, a bond issue of $1,000,000. This bond issue would be redeemed from revenue within 20 years."

As this is written another report is before Jamestown city council to the effect that under current prices the committee feels it possible to make an annual profit of $177,000.00 in operation of the plant in question. It further recommends that such a plant could pay $50,000.00 plus 1¾% interest on the bond issue, annually, retiring it in 20 years.

With the businesses bought out that are under option, the city milk plant could, it was reported, possibly reduce milk and cream prices proportionately, reducing this profit by $70,000.00 annually – but even if milk was reduced two cents a quart, or to 19c, it could still realize $37,000.00 in the black over a year's time.

Milk dealers look upon the proposition with distaste.

"Everyone of us is against the idea," said James Jenkins, who has built up a sizeable business in the community of 45,000, and is now president of the local Milk Dealers' Association.

"Recently all of us agreed unanimously to oppose the principles involved in a municipally-owned plant," he continued. "We're for free enterprise, upon which the country was built. We have no definite assurance that our city will not have a municipal shoe store, bakery, gas station, insurance company, meat market or grocery store!"

Jenkins further stated that milk prices are not excessive in view of high quality, and that local prices are consistently lower than those in Buffalo, N. Y., or Erie, Pa., nearest cities of size.

"These options are just protective," *But*, the fact remains that a majority of the 25 odd dealers in Jamestown have signed options or indicated their willingness to sell their businesses to the city, if the municipal plant idea meets with public approval.
stated Jenkins. "Sure, all of us will sell, at a price, and especially since we don't want to go into a price war between the city and anyone else." (Options become legalized, it was said, upon mayor's signature, which is pending upon approval of a municipal plant by city council.)

It appears that the price war would be between the city and the local outlet of the Dairymen's League Cooperative Association, under Arthur Dersch, who is flatly against city establishment of a milk plant. He reported it would present unfair, tax-free competition to private dealers, tended toward socialism that might spread to other fields, and would present a problem in unemployment and usurpation of individual rights.

Art Dersch defined four types of dealers in the Jamestown situation:

1 – The independent operator, who buys from producers as needed and sells immediately.

2 – The combination milk and ice cream dealer, who uses part of the surplus he gets regularly from producers for ice cream.

3 – The producer-dealer, who owns cows and sells retail or otherwise.

4 – The cooperative association, largest dealer in Jamestown; all the milk produced by members is paid for on the basis of how it is used.

Dersch reported that a committee of dealers, appointed for research on the problem, wrote to Tarboro, N. C., where a milk plant is municipally-owned. They learned that milk there is 22c a quart, a cent higher than in Jamestown; cream is proportionately higher. It was said Tarboro took over milk handling because of a sanitation problem. This is a town of about 10,000, as compared to Jamestown's population of some 45,000. Incidentally, when Samuel Carlson, years ago, first proposed that Jamestown "go into the milk business," one of his biggest arguments was betterment of civic health control.

We talked to one small dealer, other than Dersch, Jenkins, Peterson, and Carlson. He didn't want to be mentioned, but he said that he optioned his business so that, if the city builds a plant, he wouldn't be in the middle of a price war.

Against this background Jamestown voters will make their decision. That the city can put out milk of equal quality at a lower price milkmen doubt. What the citizens of Jamestown will do, however, is the big question.

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Abbotts Dairies Head Passes Away—Had Distinguished Career

Death Ends Christian R. Lindback's Long Association With Philadelphia Concern — Ridgway Kennedy, Jr. Named President

ON MARCH 20, 1950 death terminated the long and distinguished career of Christian R. Lindback, President of Abbotts Dairies in Philadelphia. Mr. Lindback joined the Abbott firm in 1912 and became president in 1914.

Born in Denmark Mr. Lindback grew up with the dairy industry. His father made the famous "Lure" brand butter, the official trade-mark of the government of Denmark used on butter of proven quality.

CHRISTIAN R. LINDBACK

RIDGWAY KENNEDY, JR.

The elder Lindback moved his family to the United States when Christian was four years old. After graduating from high school in 1895 Mr. Lindback went to work in his father's creamery. A few years in the creamery and he decided to strike out for himself. A stint as a sales representative for the De Laval Separator Company was followed by three years with the Creamery Package Manufacturing Company. It was during this period that Mr. Lindback became acquainted with George Abbott, Quaker founder of Abbotts Dairies, Inc. In 1912 he joined the Abbott firm as vice-president.

One of the first innovations introduced by Mr. Lindback to the Philadelphia Dairy Industry, was the bacteriological control of milk at the farm.

The early recognition of the value of medical supervision in industry won for Abbotts Dairies one of the first certificates issued by the American College of Surgeons for high medical standards established by the Company for its employees.

In that same year (1925) Abbotts instituted a cooperative program with its "A" Milk producers, in the elimination of all cows reacting to tuberculosis. The company agreed to indemnify its farmers for a portion of the value of each condemned animal.

From 1920 to 1938 Mr. Lindback served as President of the Philadelphia Milk Exchange. In 1929 he was elected President of the International Association of Ice Cream Manufacturers, in which capacity he served two years, and is at present a director. He is likewise a Director of the National Dairy Council, and a trustee of Bucknell University.

On June 9, 1941, "in recognition of his notable contributions to the dairy industry for the past quarter of a century and to honor him for his idealism in the interests of the health and social security of his fellowman," Mr. Lindback received from Bucknell University an honorary degree of Doctor of Laws.

At a special meeting of the Board of Directors of Abbotts Dairies, held on March 29, 1950, Ridgway Kennedy, Jr. was elected President, succeeding Mr. Lindback.

Ridgway Kennedy, Jr. has been the company's Vice President and General Manager since 1944. He has been associated with Abbotts Dairies since 1912. He is first Vice President of the International Ice Cream Manufacturers Association, and a Vice President of the National Dairy Council.

Abbotts Dairies, Inc. was founded in 1876 by George Abbott. Its operations include the distribution of milk in Philadelphia and the surrounding territory, and the manufacture and distribution of ice cream and cheese products.

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METAL SPONGES
Designed especially for cleaning all types of dairy equipment and utensils. Will not rust or splinter, cut the hands or injure metal or plated surfaces. Kurly Kate Metal Sponges are fast working, easy to use, and easy to keep clean. Made in STAINLESS STEEL, NICKEL SILVER and BRONZE.
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JOBBER OR WRITE DIRECT

PUMPING MILK AND CREAM

(Continued from Page 26)

only partially liquefied in all probability. Pumping at this point is very likely to cause a churning in the product. On the other hand when milk has been heated to a point well above the melting point of the fat, such as in the case during pasteurization, little damage is done to the milk in pumping at this temperature which will probably be in the neighborhood of 143°F. Most operators, however, prefer to cool the milk in the vat with water to some extent before pumping it over the surface cooler as a means of conserving refrigeration and perhaps accomplishing more thorough cooling of the product. The point to which the milk is cooled, then, is of considerable importance if the milk is to be pumped at this point. It is the belief of the writer that milk should not be cooled to a temperature lower than 125°F. at this point.

Again with the one level type of plant it may be desirable to locate the surface cooler for the milk at such a point that it is impossible to conduct the cooled milk to the bottler by gravity, which results in the need for a pump at this point to elevate the milk into the bottle filler supply tank. Here again the milk fat has been reduced in temperature from 143°F. very rapidly to 40°F. at which temperature the butterfat theoretically is a solid but actually is partially solidified and partially liquid. It has been shown that if milk can be repumped at this point before the cream has had a chance to rise to the top (within a few minutes) this process can be accomplished without visible damage to the product. This means, then, in order to have success with this type of setup the pumping of milk to the cooler and pumping of milk from the cooler trough should be a continuous process rather than an intermittent one. The writer has had considerable experience with this type of setup. By means of the use of milk level controls a very fine equipment setup can be had and it will be one which may be operated with a minimum of product losses.

E. L. Fouts, Head of the Department of Dairy Husbandry and Dairy Manufactures at the University of Florida, is a new comer to the pages of the American Milk Review. To a host of dairymen, however, particularly in the South, he is known as a careful student of dairy problems and an ardent crusader for a better industry. In this article, written exclusively for the American Milk Review, he presents an able discussion of the important problem of milk and cream pumps. This is the second of two installments.

Leaking Pumps

Most sanitary milk pumps utilize either rubber, paper, or fiber gaskets, which under ordinary conditions give a perfect seal, and no leaks should be experienced at this point. If a milk pump leaks on the gasket side of the pump it will be well to examine the pump carefully for dented areas which might be causing the gasket to be unable to give complete seal on this side of the pump. Paper gaskets should, of course, be used only once and then discarded and rubber gaskets should be removed, scrubbed, and sterilized after each use. The gasket seat on the pumps using rubber gaskets should be given special attention since it frequently is somewhat difficult to get at and provides a lodging place for milkstone which might harbor bacteria.

The other side of the pump is sealed around the shaft with a carbon seal or a plastic seal, and there is no excuse for leaking pumps at this point. If a pump leaks around the seal, the seal should be replaced.

Eliminating small leaks soon pays for gaskets and seals, and they should always be kept on hand in ample supply for immediate use when they are needed.

Cleaning and Sterilizing Milk Pumps

Any pump to be used in connection with the handling of dairy products must be completely sanitary, easily dismantleable, and readily cleaned and sterilized. A pump should have no areas inside of it that are difficult to get at with a brush for cleaning purposes. The inlet and outlet should be easily accessible for brushing.

At the conclusion of the day's run the centrifugal pump should be completely disassembled, brushed, thoroughly rinsed, and placed on a draining rack to dry. It is quite satisfactory to reassemble the pipeline, including

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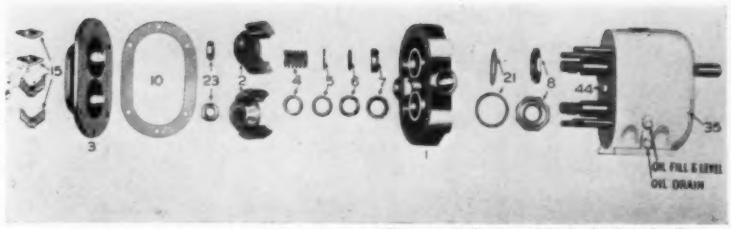
the pumps, as soon as the washing has been complete or it may be allowed to remain on the drain rack until ready for use the next day.

In handling the positive pump it is of extreme importance that care be taken when the pump is dismantled and put back together that any of the parts are not dropped or bumped. This type of pump is a very carefully machined apparatus and a bump or any other type of careless handling may impair its usefulness severely. Most plants using the positive type pump have learned that it is not only desirable but necessary to secure a rubber mat to put on the floor in front of the pump at the time it is being disassembled for washing. These mats are relatively inexpensive and will save their cost by protecting some pump part from just one drop of a few inches onto a tile or concrete floor. Some successful operators make a practice of bringing a bucket of water and a brush to the pump and wash the pump parts immediately after disassembling them, rinsing thoroughly, and then putting the pump back together.

In no case should gear type pumps be left disassembled and piled on a drain rack along with other sanitary pipe and equipment until it is needed for further use.

Pumping Ice Cream Mix

The question is frequently asked: Is it good practice to pump ice cream mix from the refrigerated mix vat or tank into the freezer, or will the pump possibly do some damage to the ice cream mix? It can be definitely stated that pumping of the cold ice cream mix will not damage it in any way and offers a great convenience to the operator. In some installations the refrigerated mix is placed on an upper floor or on an elevated platform in order to avoid the necessity of pumping the mix. The cost of pumping is relatively small and is more than offset by the trouble incurred by the use of an elevated vat which often is hazardous to the operator in climbing up to examine the mix or to wash and sterilize the vat. When ice cream mix is homogenized at the pressures commonly employed in the processing of this product the small amount of pumping required to elevate the mix from the bottom of the mix storage vat to the freezer will not damage the mix in any way. It is, of course, desirable to stop and start the pump as the mix is needed rather than to permit the pump to run continuously and control the flow of mix by a valve. It is conceivable that some damage might be done if a centrifugal pump was permitted to run continuously against a closed valve during the entire freezing time.



Photograph Courtesy Waukesha Foundry Co.

With the emphasis on sanitation and cleaning, pumps must be constructed with a minimum of parts. This picture shows all of the pieces of the business end of a sanitary pump.

An official in Providence, Rhode Island says that Providence was one of the first cities in the nation to require compulsory pasteurization. Now we note Charleston, South Carolina proclaims it is "the first major city in the nation to require that all milk sold in its limits be pasteurized."

Wonder what the correct answer is.

Need for Improved Pumps

It is the belief of the writer that the dairy industry could use an improved low cost centrifugal pump on many installations, especially throughout the smaller dairies. The greatest abuse to milk comes at places in the processing of milk and cream where small quantities of product must be pumped with pumps of too great capacity which means that the pump must be throttled by partially closing a valve. It would seem that some of the companies manufacturing dairy equipment would be interested in developing a small pump of somewhat variable capacity which could be installed to make it unnecessary to use throttling valves in connection with milk pumps. It is, of course, necessary at the same time to keep in mind that the price of such equipment must be kept at a point where the average dairy operator could afford to purchase the equipment. It would seem that a pump which could be sold at a price somewhere between the centrifugal pump and the positive pump, which would incorporate the advantages listed, would have a wide sale to the smaller dairymen who need to pump relatively small volumes of product.

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EFFECTIVE CLEANING

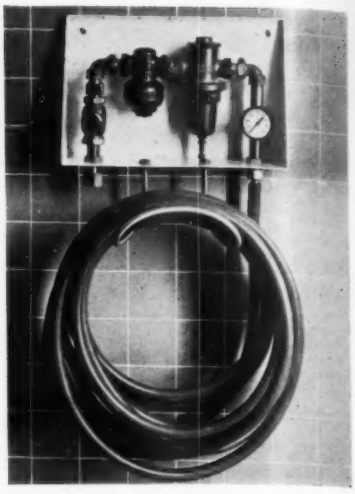
(Continued from Page 33)

Water Station or at least a Pressure Regulating Valve for every few Water Stations. A uniform water pressure at every outlet and Water Station is not satisfactory. If it is desired to "blast" broken glass out from under wide bottle washers a water pressure of 40 psi may be necessary, whereas, it may be found desirable to use a water pressure of 15 psi for rinsing ice cream freezers or milk-bottle fillers. Again, if large containers or vats are to be filled, a large flow of water with a relatively high pressure, such as 50 or 60 psi, will save time.

To simplify the matter of controlling water pressure at each Water Station and outlet, the water should reach the points of use at a pressure somewhat in excess of the highest pressure needed. Then in each location a water pressure as much less than the overall pressure as is desirable can be had through properly setting the Pressure-Regulating Valve. Of course, with the Pressure-Regulating Valve a pressure gauge should be used so that the pressure can be accurately set.

Installing a water supply system of this kind is not expensive as compared with the type of system usually installed and the better rinsing, together with the saving of water and fuel, will more than justify the small investment in Pressure Regulators and gauges.

Rinse water is piped into this water station through the connection on the lower left. It passes into the hose through the connection on lower right.



Water Station after the cover has been removed. The body of the Master Valve, the Strainer, the Pressure Regulator, and the Pressure Gauge can be seen.

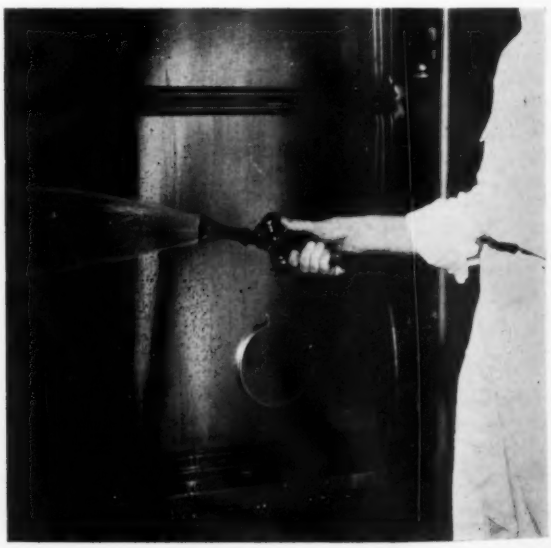
The Controlled Pressure Water Station is comprised of a cabinet with a removable stainless steel cover in which are a Pressure-Regulating Valve, a Strainer, a Pressure Gauge and a Master Valve. The Pressure Gauge can be observed through a window in the cover. To the Controlled Pressure Water Station is attached a hose hanger.

Controlled Pressure Water Station

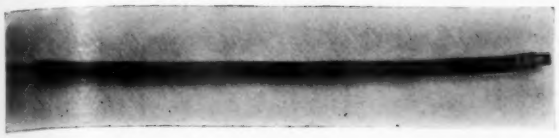
The Controlled Pressure Water Station can be equipped for either one hose or for two hoses. Where it is equipped for one hose it has a single hose hanger and where it is equipped for two hoses it has two hose brackets.

The Controlled Pressure Water Station is made in two forms. In the one form it can be attached to a wall or column and either set close to the wall against a Neoprene gasket which is attached to the back of the unit or set out from the wall by means of spacers. In the second form the Controlled Pressure Water Station has a flat cover and the cabinet is sunk into the wall while the cover is set flush with the surface of the wall. The form first described was found to be more

In this picture the Shut-Off Valve with the Round Nozzle is being used to rinse the inside of a product storage tank.



A broad sheet of water is delivered by the Blade Nozzle which makes it particularly adaptable for close up rinsing.



The Shut-Off Valve is attached to a strong Whip-end which is attached to the Lightweight Hose. The Whip-end takes the wear and tear of bending close to the nozzle. At left is a coil of ordinary creamery hose and the Lightweight Hose developed by Mr. Perry.

adaptable for existing plants while the second one described was readily installed in new plants.

The cover is attached by means of small bolts, the covered nuts of which can be removed only by means of a proper wrench so that the controlling of the water pressure is in the hands only of those designated by management.

½" Special Lightweight Hose

Except in cases where a large flow of water is essential the ½" Special Lightweight Hose has been found to be not only large enough but very desirable. This Lightweight Hose has been particularly designed for the cleaning operation. Its construction is quite unlike that of the conventional ¾" creamery hose. The Lightweight Hose is not only light in weight-it weighs about one third as much as conventional creamery hose – but is flexible and easily managed with one hand. Because it is not bulky and is flexible the Lightweight Hose is particularly adaptable for close quarters such as the inside of milk tank trucks, pasteurizing vats, etc. Due to its light weight and flexibility it can not only be easily handled and coiled but also does not fatigue the operator as does heavier hose. The Lightweight Hose is not designed for use with steam but instead with cold, warm or hot water.

Shut-Off Valve

One of the most aggravating features of the clean-up operation has been the free-running hose. Not only is the free-running hose an unsightly matter, but it is prodigally wasteful of water and fuel. Also, where free-running hoses are used, the floor is inevitably wet. It is not reasonable to expect an operator to go back to the Water Station and shut off the water each time he drops the hose because such a procedure would waste a great deal of time and in most cases make it necessary for him to adjust valves continually in order to have water with a temperature which he considers satisfactory.

A Shut-Off Valve has been designed which can be attached to the end of the hose and which not only at all times gives the operator control of the flow of water from the hose and the kind of stream of water best adapted for the rinsing he has to do but also saves very substantial quantities of water and fuel. The Shut-Off Valve is a specialized metal valve coated with Neoprene which prevents damage to the processing equipment and to the Shut-Off Valve itself. Normally, it is in the closed position and delivers water only when the handle is depressed as it is when the operator holds the Shut-Off Valve in his hand. It is equipped with a clip so that it may be locked in the open position for filling vats, containers, etc. It is very sturdily constructed and will resist even heavy abuse. However, Shut-Off Valves should be used only for the purpose for which they were designed and not to knock off can covers and hammer sanitary fittings.

For close-up rinsing the Shut-Off Valve is equipped with a Blade Nozzle which delivers a blade of water having a large rinsing capacity. When the water pressure is correct–between 10 and 25 psi–there will be no splashing so that the operator can stand very close to the surface being rinsed without getting wet. The blade of water rinses down and does not splatter so that it efficiently and effectively rinses away any soil. The Blade Nozzle is desirable for rinsing flat or irregular

John R. Perry, the author of this article, is an engineer who has made an exhaustive study of the problem of cleaning in dairy plants. With an engineer's grasp of how to give principles a practical twist he has evolved a number of new cleaning devices. This is the first of three articles written exclusively for the *American Milk Review*. The others will follow in subsequent months.

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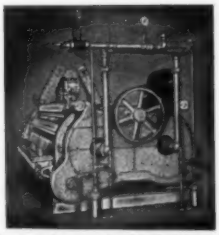

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not have a Nozzle Tip in it, it can be used for close-up rinsing, since with low pressure water it delivers a soft, round stream of water which is adaptable for close-up rinsing but is not, however, as satisfactory for this purpose as the blade stream delivered vy the Blade Nozzle. The Round Nozzle Assembly can be equipped with a variety of Nozzle Tips so that it can be used to rinse satisfactorily the inside of product storage tanks from the manholes, the inside of tubes of heaters and coolers, the inside of sanitary pipe, under platforms, under bottle washers, etc.

When the Shut-Off Valve is used, it is possible to rinse satisfactorily with a minimum of water. Where the water is heated, as it should be for virtually all rinsing in dairy plants, minimizing the water used also minimizes the amount of fuel used. Because the Shut-Off Valve delivers enough water for satisfactory rinsing and also because it eliminates the free running of water, a great deal less water is consumed when it is utilized than when a free-running hose is used.

In many plants a distinct advantage is gained from utilizing "softened water" in boilers, for rinsing processing equipment, for making up cleaning solutions, in bottle washers, and other uses. Since controlled Pressure Water Stations, Lightweight Hose, and Shut-off Valves substantially reduce water consumption they make it possible to use considerably smaller water softeners than can be utilized without them. Also the amount of salt necessary for regeneration is reduced and the number of times that regeneration is necessary is decreased.

The matter of "plant waste" is a problem in some plants. Where the Controlled Pressure Water Stations, Lightweight Hose, and Shut-off valves are employed, the quantity of "plant waste" is appreciably reduced and the problem waste creates is simplified.

Experience has shown that it is not desirable to interchange nozzles on the floor. Instead, it has been found much better to equip the Shut-Off Valve with the nozzle which is best adapted for the rinsing to be done. So, for all close-up rinsing, the Blade Nozzle is generally used, whereas, for rinsing at a distance, under platforms, etc. the Round Nozzle Assembly is employed.

Whip-End

Although the ½" Special Lightweight Hose has been found to have very excellent durability and when properly used, to have a very long life, it has been found advisable to use a Whip-End between the Shut-Off Valve and the Lightweight Hose. The Whip-End is a short length of hose with a thicker wall than the Lightweight Hose. It is equipped on one end with a coupling which attaches to the Shut-Off Valve and on the other end with a coupling that attaches to the Lightweight Hose. It flexes over a wide arc so that it will not bend or crack as the Lightweight Hose may do just in back of the Shut-Off Valve if it is connected directly to the latter.

In some cases it is desired to detach the Shut-Off Valves from the hoses when they are not in use or so that Shut-Off Valves with different nozzles may be used on the same hose. In such cases it has been found desirable to use a Quick Detachable Coupling which should be attached to the end of the Whip-End which connects to the Lightweight Hose. A Quick Detachable Coupling can be obtained which has a simple self-closing valve so that when the detaching is done the flow of water is shut off at the Quick Detachable Coupling. In some cases the hoses are also removed at the end of the cleaning operation and when this is the practice the Detachable Couplings can be located at the Water Stations.

●

LATHROP-PAULSON REPRESENTATIVE

Mr. Harvey Andersen has joined the sales department of the Lathrop-Paulson Company, Chicago, manufacturers of complete receiving room dairy equipment.

Mr. Andersen has a very wide experience in the manufacture of cheese, spray milk powder, ice cream, butter and the processing and marketing of fluid milk. He was educated at Iowa University and has spent many years in sales and supervisory work with the Roberts Dairy Company, Omaha, Nebraska and manager of their Lincoln, Nebraska plant.

QUALITY CRUSADER DIES

E. W. Harrington, President of Sterling Research Corporation Gave Much to Dairy Industry

On March 21 death came to Eugene W. Harrington, 83, President of the Sterling Research Corporation and great friend of the dairy industry.

A vigorous campaigner for better milk, Mr. Harrington, was constantly in the van of the struggle for quality.

E. W. HARRINGTON

Mr. Harrington was graduated from the Genesee and Wyoming Seminary and was teaching in the rural school system at the age of 16.

After five years, he joined the Delaware, Lackawanna & Western Railroad. His positions during 13 years of railroad work included general station agent.

Going to Buffalo in 1890 as a cashier for the U. S. Express Company, he also began attending classes of the University of Buffalo Law School. He was graduated in 1893 and became a Buffalo attorney.

Mr. Harrington became president of the Kojene Products Corporation in 1924 and later of the Maculette Garment Company and the Carlin Chemical Corporation.

The three companies were sold in the 1930s and Mr. Harrington became President of Sterling Research in 1937.

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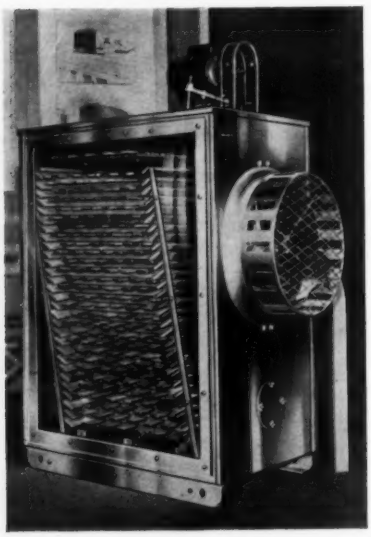
New Marley Aquatower

THE MARLEY COMPANY, INC., manufacturers of water cooling towers, nozzles, and DriCoolers, announces that the new 1950 Aquatower line will have an additional size plus improvements on all models.

A 20-ton Aquatower will be available to meet the increasing demand for this size unit. Interiors of all towers will be lined with a thick coating of rubber to make the interior



of the tower impervious to corrosion. A new quiet, deep pitch fan is used which operates at one half the usual speed. The rubber lining plus the slow speed fan gives unusually quiet operation.

Aquatowers are a packaged product, completely assembled, ready to go. They are sized from 3 to 50 tons. Aquatowers still have the open distribution basin, redwood filling from top to bottom, totally enclosed motors and complete basin fixtures. They are carried in stock in many principal cities or are available for immediate shipment from any of the four Marley Factories. Request Bulletin AQ-50.

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Data Book on Insulation

RUBATEX DIVISION of Great American Industries, Inc., Bedford, Virginia, has released a 20-page book on the use of Rubatex R-103-S Insulation Hardboard for low-temperature insulation purposes. This is a comprehensive technical manual, containing detailed information for use by design and construction engineers in applying the product in buildings and in manufactured products.

Rubatex Insulation Hardboard is an expanded-rubber compound, made of synthetic stocks. Its structure is a myriad of tiny individually-sealed balloon-like cells containing inert nitrogen. It is claimed to be far superior to other materials for low-temperature insulation, having a K factor of 0.21. This material will not absorb moisture and may be used without an added vapor barrier. Rubatex Insulation Hardboard is light in weight and has excellent structural strength. It cannot be attacked by rot, vermin or bacteria.

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For Detecting Milkstone

KLENZADE PRODUCTS, INC., Beloit, Wisconsin announces exclusive distribution of Mineralight for the dairy and food industries. Mineralight is a small, compact, portable, long wave ultra-violet light which excites fluorescence in milkstone, fats, and other extraneous soils not readily apparent to the eye.

Mineralight is used like a flashlight and when beamed against equipment surfaces or into cans, deposits fluoresce and are instantly detectible. One of the important uses of this equipment is to discover the beginning of milkstone and other soil formations so that corrections can be made in cleaning procedures. It is also useful in detecting rodent contamination of stored materials, rat harborage, and evidence of infestation. The easy portability of Mineralight makes it a valuable aid to plant inspectors, sanitarians, and field men.

Mineralight operates from 110 volt 50-60 cycle AC, or two 45 volt "B" batteries. Furnished complete in a metal carrying case containing batteries and wiring circuit. Write to Klenzade Products, Inc., Beloit, Wis., for complete information.

●

Farm Milk Coolers

EIGHT NEW self-contained coil-and-rack type farm milk cooler models, refrigerated by a new rectangular-shaped sealed rotary Meter-Miser compressor designed similarly to those used in household refrigerators but with greater capacity, are produced by Frigidaire Division of General Motors.

Sizes of the new models announced by the Division range from three to eight 10-gallon cans and include both

single and double row cabinets. New Frigidaire milk coolers include: One three-can single row model; two four-can single row models; two four-can double row models; one six-can double row model, and two eight-can double row models.

Reported to afford "dependable, fast cooling", the new self-contained milk coolers are easy to install. In addition, the water bath agitator, which has been provided as an accessory in past years, is standard equipment on the 1950 Frigidaire coil-and-rack models.

This agitator circulates the ice-chilled water around all milk cans in the cooler. Uniform cooling to 50 degrees (F.) in all cans from top to

bottom in about an hour is reported. The water bath temperature under normal conditions will level off at approximately 34 degrees soon after initial cooling has been completed.

●

Automatic Packaged Boiler

AMES IRON WORKS, manufacturers of boilers at Oswego, N. Y., announces a further addition to their line of automatic packaged-type Units, with the development of the 500 horsepower AMESTEAM Generator, available in pressures from 15 to 200 lbs. and for firing with oil or gas. In areas where both oil and gas are available, oil-gas combination Units may be used to take advantage of varying seasonal fuel costs.

The new 500 horsepower AMESTEAM Generator is furnished complete, ready for installation on boiler room floor. When connected to steam, water, fuel, electric lines and to breeching or stack, they are ready for operation. The only foundation required is a level floor of sufficient strength to carry the load.

Furnace and tubes are arranged to permit a smooth flow of hot gasses over all heating surfaces.

●

Handbook and Almanac

A 68-page Farmer's Handbook and Almanac has been published by The B. F. Goodrich Company in a 1950 edition and is available upon request to principal headquarters in Akron, Ohio.

Besides Almanacs for each month and calendars for 1950 and 1951, the volume covers such subjects as Accident Prevention, Belting Care, Brooding, Chemicals on the Farm, Christmas TreeFarming, Cloud Reading, Eclipses for 1950, Electricity for Better Farming, Farm Measures, Fire Prevention, Frozen Food Storage, Fruit Gardening, Fuel from Woodlands, Gestation Table Handyman Ideas, Home Decorating, Hunting, Information for Farm Builders, Interesting Facts, Ladder Efficiency, Milk Cooling Equipment, Origin of Wedding Customs, Poisonous Plants, Recipes, Reference Tables, Research in Rubber, Rubberoddities, Use and Care of Sewing Machine, Signs of the Zodiac, Silage Cap, Strange Facts, Tire Care, Inflation, Buyers' Guide, Tractor Tire Development, Tubeless Tire, Weather Oddities and Weights and Measures.

Measures Water Hardness

TOTAL WATER HARDNESS, and the hardness caused by calcium alone, now are accurately measured by simple, easy methods in approximately one minute.

Hall Laboratories, Inc., Pittsburgh, in announcing the new total-hardness methods, reported that they are based on the discoveries of Dr. Gerold Schwarzenbach, with Hall modifications that make them convenient for general field use.

The improved methods developed by Schwarzenbach and his associates in Switzerland have been completely confirmed as to accuracy and validity through intensive research and test application by Hall investigators, the Pittsburgh consultant firm announced.

The new Hagan Total Hardness Test involves a simple, direct titration with a distinct color change at the end point, so that the possibility of error due to subjective judgement is eliminated.

Also of practical advantage in its application is the fact that interferences, although seldom found, are easily eliminated.

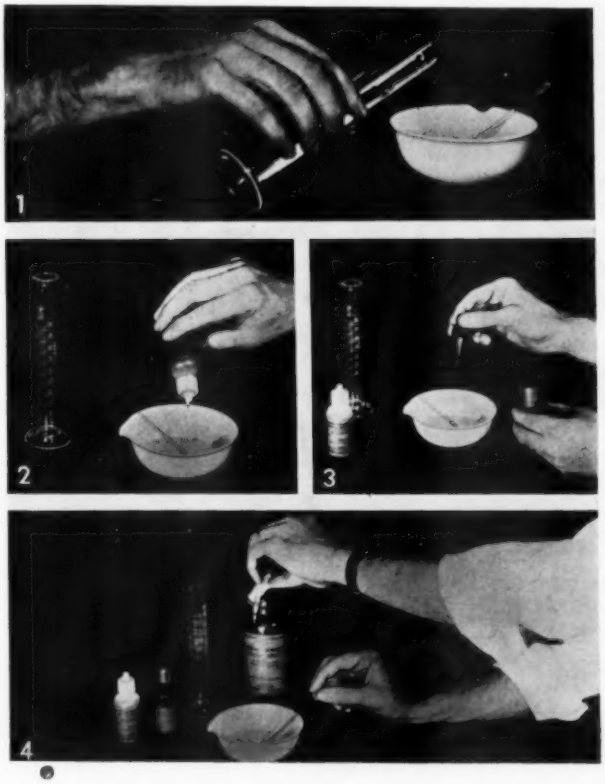
The new Hagan Calcium Test is, similarly, a direct titration to a clear-cut color change. No complicated heating, waiting, filtering or estimating is required. The answer, correct to less than 1ppm of calcium, is found in one minute.

Where it is desirable to determine hardness due specifically to magnesium in the water, the operator makes the total hardness test and calcium test, the difference giving him the magnesium value.

All equipment and reagents required for either the Hagan Total Hardness Test or the Hagan Calcium Test is being made available through Hagan Corporation (parent of Hall Laboratories, Inc.) and its associated firms, Calgon, Inc., and The Buromin Company, the announcement adds.

A clear sample of the water to be tested for total hardness is measured into a porcelain dish. A small amount of buffer solution is stirred in to bring the sample to a suitable pH value. The indicating solution then is added, and stirred. The sample at this point shows a red color. The final step is addition of the titrating solution, which turns the color to blue. Disappearance of the last trace of reddish tinge marks the end point.

Procedure for hardness due to calcium alone is identical, but with a different buffer solution and indicator.



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92 WARREN STREET NEW YORK 7, N. Y.

(The deadline for Classified Advertising is the 10th of the month preceding publication.)

No classified advertising will be accepted to run with borders or special spacing. All such advertisements are considered "Display" advertising and will be billed at regular display advertising rates. (Rates and mechanical requirements on request.)

EQUIPMENT FOR SALE

FOR SALE — Milk tanks for sale, Fruehauf and Trailmobile tanks, size 3,000 to 3,850 gallons, like new. Priced for quick sale, contact Ray Fay, Ontario, New York. Telephone Ontario 4311. 4-M

FOR SALE — 1 6-20 Cherry-Burrell Bottle Filler (motor driven) $300.00; 1 2-section Cooler with cover (6 feet wide) $150.00; 1 4-wide Sturdibilt Bottle washer $200.00; 1 Preheater $75.00; 1 7½ Gal. per minute McCormick-Deering Separator (motor driven) $75.00; 1 Weigh Unit with platform Scale $50.00; 1 12 H. P. Leffel Boiler $200.00; 1 Babcock Tester $50.00; 1 G-100 Cherry-Burrell Bottle Filler (3 cappers for 48 MM. bottles) (3 cappers for 51 MM. bottles) $700.00; Prices quoted are F.O.B. Newport, Kentucky. All of this equipment was in use in the past 30 days. We will be happy to supply further information if desired. Clover Leaf Dairy, 11th and John Streets, Newport, Kentucky. 4-M-2

FOR SALE—Round quarts, pints, ½-pint bottles and cases; one Fairbanks dial scale; one weigh can; one receiving vat; one Crescent L-P can washer; one rotary L-P can washer (new); one Cherry-Burrell G-70 filler; one 4-section 6′ cooler; three spray vats; one cream separator; one 100-lb. butter churn and worker; one cheese vat; one Cherry-Burrell viscolizer; two small surface coolers; one Creamery Package 6-wide soaker washer; one 20 hp. Scotch Marine oil-fired boiler; four milk pumps; 1½″ sanitary pipe fittings. All this equipment in guaranteed operating condition and reasonably priced. Write Hendricks Dairies, Lansdale, Pa. 4-M

EQUIPMENT FOR SALE

REBUILT — Pasteurizers, Milk Coolers, Bottle Fillers, Ice Machines, Plate Coolers and Heaters, Homogenizers and Bottle Washers. Send us your requirements. Ohio Creamery Supply Company, 701 Woodland Ave., Cleveland 15, Ohio. 4-M-t.f.

We can furnish new and used tight barrels for sweetened condensed milk, condensed buttermilk and for the cooling of milk. Also slack barrels milk powder and other dairy and poultry products. Also egg cases. Write Buckeye Cooperage Co., 3802 Orange Ave., Cleveland 15, Ohio. 4-t.f.

FOR SALE — 125 G.P.H. Marco Homogenizer — suitable for the milk industry and also for using it in making flavor emulsions; Premier Collois Mill—50 G.P.H.; Lightnin' Mixer — Model D2, Style 75250, ½ h.p., 3 phase, AC current, 1725 r.p.m., 220 volt. Write Cott Beverage Corporation, 197 Chatham Street, New Haven, Conn. 4-M

FOR SALE — 800 gallon Cherry-Burrell Homogenizer, equipped with sanitary stainless steel head, motor 30 h.p., 3 phase, V belt—good condition—$1,000.00. Write Pauly Cheese Co., Green Bay, Wisconsin. 4-M

FOR SALE — York shell-and-tube brine cooler, built 1939, 9′x15″ tubes, complete with ammonia float regulator, strainer and pipe connections, all in good operating condition; $100.00. Write the Rosedale Dairy Company, New Berlin, Pennsylvania. 4-M

FOR SALE — Good used quart milk bottles; 200 gross 48 mm. Econopor Handy Quarts — $1.75 a gross; 100 gross 45 mm. round Dacro quarts 8½ inch — $1.75 a gross; 100 gross 47 mm. round Dacro 9½ inch quarts — $1.75 a gross; 200 gross 48 mm. T-square 8¼ inch quarts — $4.00 a gross; 150 gross 51 mm. T-square 8½ inch quarts — $4.00 a gross; 200 gross 56 mm. round 8½ inch quarts — $4.00 a gross. F.O.B. Newark. Write Mutual Milk Bottle Exchange, Inc., 25 Fourth Avenue, Newark 4, New Jersey. 4-M

EQUIPMENT FOR SALE

FOR SALE — One Nuline 20 valve filler set up for flat link conveyor — completely rebuilt and equipped with 56 mm. filling valves and cappers — $1,600.00. Write Ogden Dairy Company, 4333 Ogden Avenue, Chicago 23, Illinois. 4-M

FOR SALE — 5000 lb. York Short Time Pasteurizer complete including section for cooling raw milk; 100 to 300 gallon Stainless Steel Pasteurizers; 1000 gallon Cherry-Burrell Horizontal Coil Vats with stainless steel linings and tinned copper coils; No. 27 Creamery Package Filler and Capper; G-70, G-160, GV-20 Cherry-Burrell Fillers; 4, 6 and 8 wide Bottle Washers; Creamery Package and Lathrop-Paulson Can Washers, 3 c.p.m.; 125 to 1500 gallon Homogenizers or Viscolizers; about 135 ft. Power Can Conveyor, also 20 ft. Power Case Conveyor with Booster and Power Units; 2000 and 3000 gallon Pfaudler Glass Lined Storage Tanks for by-products only; three 3000 gallon Alloy Products Stainless Steel Truck Tanks and Trailers; 3 ft. to 6 ft. Stainless Steel, also Copper Vacuum Pans. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, New York. Telephone, MUrray Hill 2-4616. 4-M

FOR SALE — Clayton Steam Generator, 1949 model, purchased from Meyer Blanke, advertised by Cherry-Burrell, 10 hp. oil burning. Make us an offer. Baker's Drive-In-Dairy, 623 North Glendale, Wichita, Kansas. 4-M

FOR SALE — 100 and 150 gallon Stainless Steel Cherry-Burrell pasteurizers; 750 ft. of 1¼″ Ammonia Coils; Quart and pint cases for round bottles. Write Shively's Dairy, 454 Norland Avenue, Chambersburg, Pennsylvania. 4-M-1

SPECIAL OFFERINGS — Four Jensen Stainless Steel Cabinet each containing 8 wings, 56 tubes high; two Mojonnier Stainless Steel Cabinet Coolers, 6 wings each, 72 tubes high; four 14 ft. Specialty Brass Internal Tubular Cooler (or heater) Sections with 10 2″ stainless steel tubes, never used; 12 ft. Creamery Package I.T. Cooler (or heater) with 28-2″ stainless steel tubes. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, New York. Telephone — MUrray Hill 2-4616.

FOR SALE — Divco truck in good condition, in use every day. Looks like the new models. Price $300.00. Write Grand View Dairy, La Fayette, Indiana. 4-M-2

FOR SALE — One 1941 Viscolizer. Model No. 441, with stainless steel head, 400 gallon per hour 15 H.P. Write Warner's Dairy, Inc., Red Lion Pennsylvania. 4-M

FOR SALE — One 12-mold Larrie popsicle tank, agitator and agitator motor, thermostat expansion valve, insulation covering on surge tank, in very good condition. Write Warner's Dairy, Inc., Red Lion, Pennsylvania. 4-M

EQUIPMENT FOR SALE

FOR SALE — One Westfalia cream separator, Model 1604, 3,500 lb. capacity, built-in motor, 4 hp., 60 cycle, 220 volt, 1720 rpm. This separator will be taken out of service February 1st. The motor and mechanical condition is in first class condition. Write Warner's Dairy, Inc., Red Lion, Pennsylvania. 4-M

FOR SALE — One Heil 6 wide, handles anything from ½ gallon to ½ pint bottles, with chlorinator, good condition — price $2,500.00; One Cherry-Burrell Model G70 filler, equipped to bottle 56 mm. paper, including 2 quarts, plus 45 mm. Dacro — $400.00; One Cherry-Burrell 29 Separator, 1650 lbs. per hour and cream cooler — price $125.00; One Cherry-Burrell 30 gallon combination power churn and worker — price $75.00; 1-8 pocket Babcock tester with heater, price, $35.00; One Vitler 3½ ton pack icer with 1½ ton bin, 9 months old, price $2,000.00. Contact J. Harry Brickly, 1761 E. McNichols Road, Detroit 3, Michigan. Tw 1-7373. 4-M

FOR SALE — Mojonnier Vacuum Pan 36" size, tinned copper, with internal tubes for heating, complete with fittings, vacuum pump and stairs. For further information, call or write: Louisiana Creamery, Inc., Baton Rouge, Louisiana. 4-M

FOR SALE — Used milk bottles and cases. Attractive prices. Barnett Bottle Co., 825 S. Meridian St., Indianapolis, Ind. 4-M-t.f.

EQUIPMENT FOR SALE RESULTING FROM CONSOLIDATION — 1 only, 4-can Damrow Straightway Can Washer, one year old, in excellent condition, $1200.00. 1 only, Chester Stainless Steel Box Type Preheater for use with No. 136 Delaval, $300.00. 1 only, 400 gallon per hour Cherry-Burrell Viscolizer 3 years old, in excellent condition, $2200. 1 only, Milwaukee Nu-line G70 seven valve Filler in good operating condition, $1250.00. 1 only, Sturdy Bilt Bottle Washer, $1150.00. 1 only, R. G. Wright Case Washer, $450.00. 1 only, round 700 lb. capacity Stainless Steel weight can. 2" plug valve outlet suitable for platform scale use, $150.00. 1 only, Oblong 500 lb. Stainless Steel Drop Tank 18" wide x 6' long x 14" high, $100.00. 1 only, Angevine Nu Vat Stainless Steel Cheese Vat 200 gallon. Exterior Aluminum, with cheese knives and paddle. All offered subject to prior sale. If interested, contact The Page Milk Company, Coffeyville, Kansas. 4-M

EQUIPMENT FOR SALE

FOR SALE — Creamery Package ammonia compressor, V-belt drive, complete with 30 hp. motor and starting equipment; 4 x 4 York self-contained unit; 10 x 10 York late type, high speed ammonia compressor; 6 x 6 Frick Ammonia Compressor; 10,000 feet of 1¼" pipe. Write Lunney-Carson Co., 2829 North Broad Street, Philadelphia 32, Pennsylvania. 4-M

WANTED TO BUY

WANTED TO BUY—BH-40 Cellophane loading machine. Write to Box 288, care this publication. 4-M

WANTED — Stainless Steel milk tank trailer, 2 to 3000 gallons, single or two compartment. Must be in good condition. Write The Bennett Creamery Company, Ottawa, Kansas. 4-M

WANTED TO BUY—Set of three (3) Kurvetop cappers (51mm) for Cherry-Burrell G-70 filler. Write Box 280, care this publication. 4-M

WANTED — Milk drying or condensing facilities by New York State producer of skim milk. Write Box 285, care this publication 4-M

WANTED—Universal Store Bottle, 56 mm. Write Konhaus Farms, R.D. 1, Mechanburg, Pennsylvania. 4-M

POSITION WANTED

POSITION WANTED — By young man of sound theoretical and practical experience in Live Poultry production and marketing. Is an alumnus of agricultural school and is eligible for on-the-job training under the G. I. Bill of Rights. Desires change to egg or poultry trade. Write Box 272, care of this publication. 4-M

POSITION WANTED

POSITION WANTED — By Dairy and Ice Cream Accountant — Capable Executive — Excellent Background—Seeking Position or Interest requiring nominal Investment. Write Box 286, care this publication. 4-M

FOREIGN POSITION WANTED — Dairy industry student will graduate from well known State Agricultural Institute seeking foreign employment in dairy industry. Travelled extensively. Open to complete investigation. Reply to Box 282, care this publication. 4-M

POSITION WANTED — By experienced manager capable of taking complete charge of a milk, ice cream, condensing, milk powder or combination plant as manager or production manager; connection desired with a progressive, financially sound company. Write Chris Boget, 3314 Arline Ave., Rockford, Illinois. 4-M

POSITION WANTED in Connecticut or Southern New England as foreman or manager of dairy or ice cream plant or combination of both. I have 10 years experience and specialized training. Am 33 years old, married, can furnish good references. Write Box 294, care this publication. 4-M

PLANT FOR SALE

FOR SALE — Half interest in well established, prosperous highly profitable Grade A, milk and Ice Cream business in Pacific Northwest. $40,000.00, will handle, balance easy terms. Write Box 287, care this publication. 4-M

FOR SALE — One 70 x 70 all brick building, New Vane Churn, 2-400 gallon vats, refrigerating machine, can washer, water pressure system. Practically everything to start operating except boiler. Price $5,000.00. Write C. W. Beerbower, Hill City, Minnesota. 4-M

WANTS AND FOR SALES

Have you a plant or machinery you want to sell? Somebody needs what you have. A Want Ad will find a buyer.

'FRIGIDRY' Reg. U. S. Pat. Off. GBI Reg. U. S. Pat. Off. DAIRY CULTURES

Save Time—Save Money—Avoid Trouble. Use rapid-growing 'Frigidry' cultures to produce mother culture in one generation and take guess work out of making good buttermilk, butter and cheese.

FREE *Write for Booklet No. 206 on production of Cultured Dairy Products.*

GENERAL BIOCHEMICALS, INC.
25 LABORATORY PARK • CHAGRIN FALLS, OHIO

LYOPHILIZED* for UNIFORMITY • VIABILITY • STABILITY

*New, high-vacuum, sub-zero drying process.

When Shipping Poultry & Dairy Products to New York

You will find the collection of Drafts will be greatly facilitated if they are drawn through

THE MARINE MIDLAND TRUST CO. of New York

Chambers Street Office:
130 CHAMBERS STREET

XUM

PLANT FOR SALE

FOR SALE — Cheese factory in mid-western Wisconsin. Very little competition. R.E.A. New garage and boiler room. All modern living quarters, steam heat and soft water system. Write Box 293, care this publication. 4-M

WANTED TO BUY

WANTED — Two 500 gallon round stainless pasteurizers, one 500 gallon and one 1500 gallon insulated storage tanks, one 5000 lb. per hour plate cooler, one 4 tube Mojonnier tubular heater. Write W. G. Meier, Wyeth Incorporated, Mason, Michigan. 4-M

HELP WANTED

WANTED — Experienced sales engineers to represent leading equipment manufacturers. Two territories open: New York to Baltimore and South Central. These positions pay well and require top flight men. Replies confidential. Write to R. G. Wright Company, Inc., Roetzer Street, Buffalo 11, N. Y. 4-M

REPAIR SERVICE

THERMOMETER REPAIR SERVICE — Save time and money. Use our "Custombuilt" repair service. All makes of instruments rebuilt like new. Fine workmanship, fair prices and prompt service. Satisfaction guaranteed or money refunded. Write Fr. Fleischhauer & Son, 8936 181 Place, Hollis 7, New York City, New York. 4-M-4

WANTED TO BUY — Used boilers — high or low pressure. Any size or type. Also used smoke stacks, pumps and motors. Give full information and prices. Write Otto Biefeld Company, Watertown, Wisconsin. 4-M

MISCELLANEOUS

I have been advised that there is a roach, water bug, etc., spray apparatus on the market using a compressed gas to distribute the spray. It is supposed to be very effective as it penetrates all cracks, crevices, etc. I would appreciate it if you could give me the name of the manufacturer or dealer of this item at your earliest convenience. Write Box 279, care this publication. 4-M

FOR SALE — Truck lettering and trademark decals, made for your truck and store advertising. Easy to apply; uniform, distinctive, economical for small or large needs. Write for catalog. Mathews Co., 827 So. Harvey, Oak Park, Illinois. 4-M-5

FOR SALE — Chocolate Powder and Chocolate Syrup for making Non-Settling Chocolate Milk. Your trial order will receive our prompt attention. Bradway Chocolate Company, New Castle, Indiana. 4-M-t.f.

FOR SALE — Orange-Ade Base made from fresh oranges. Nothing to add but water, $1.35 per No. 10 tin. Bradway Chocolate Company, New Castle, Indiana. 4-M-t.f.

WANTS AND FOR SALES

For specialized help use our Classified Advertisements. The cost is small, the contacts many.

Lady Luck Hands out Space For Huge DISA Show In Fall

Three Hundred Delegates at Annual Convention Elect K. L. Wallace, Draw Lots for Atlantic City Booths

SPRING AND convention plans were "bustin' out all over" at the 31st annual meeting of the Dairy Industries Supply Association, held last month in Chicago. Top spot on the convention program was the tense period when members drew their space assignments for the great dairy industries exposition to be held this fall in Atlantic City.

In a meeting given to more than the ordinary quota of dramatic surprises, convention goers elected K. L. Wallace, a Canadian, president of the organization, learned that DISA's highly advertised "mystery voice" was DISA staff members Mrs. Irma Einheber, heard Dr. Sumner H. Slichter, noted Harvard economist, suggest private toll-highways as an investment possibility for private investors, and participated in the drawing that determined the location of their displays at Atlantic City.

When the ballots of the 300 delegates had been toted up it marked the first time in DISA's history that a man from a country other than the United States had been chosen to head the organization. Mr. Wallace succeeds Ray E. Olson of Taylor Instrument Company, Rochester, New York who has held the office for the past two years. R. D. Britton of Wisner Manufacturing Company, New York, was elected vice-president, and Ralph L. Young of the Sharpless Corporation, Philadelphia, was re-elected treasurer.

Elected to fill vacancies on the DISA Board of Directors were R. E. Cairns of Waukesha Foundry Co., Waukesha, Wis.; Gordon Lamont of Lamont, Corliss & Co., New York; E. B. Lehrack of the Creamery Package Co., Chicago; D. G. Colony of Manton-Gaulin Mfg. Co., Everett, Mass.; S. E. Crofts of Batavia Body Co., Inc., Batavia, Ill.; and K. L. Wallace and R. L. Young.

Dr. Slichter, in a major address before the dairy industrial suppliers predicted that a period of "contraction" might be expected in the nation's business beginning shortly after the third quarter of 1950, or perhaps a little later. This contraction, he said, would

K. L. WALLACE

likely be caused by the transition of the national economy from "catching-up", while business is still trying to satisfy pent-up demands caused by war shortages, to a "normal" period when the supply of goods on hand is largely determined by current demand.

In a question-and-answer period which followed his address, Dr. Slichter attacked the tendency in some industries to destroy senselessly and needlessly certain natural resources. He said that in the next 30 years, industry would use more raw natural resources that have been used by mankind since the beginning of time, and that some sort of conservation measures must be applied.

Dr. Slichter also surprised many hearers by suggesting that toll-highway construction be seriously considered as an investment possibility by today's investors, much as railroads were considered as an investment in the last century. "Today's trucks have made our highway system obsolete," he said. "There is no reason why the construction of new highways should be financed by the government."

On the long range outlook, Dr. Slichter was optimistic. Although he prophesied increasing government intervention in business, he nevertheless

believes that a planned economy is not in store for this country. This nation's economy, he said, has always been and always will be, probably, run by "decentralized decision-making." While many aspects of our life are becoming centralized, he said, "the choice of tens of millions of consumers will determine what is made, and four million business enterprises outside of agriculture and about six million in agriculture will each determine what it will produce and what methods it will use."

At the annual banquet, it was announced that the Dairy Industries Exposition, one of the largest industrial shows in the world, will be held in Chicago in 1952.

George E. Wallis, President of the Creamery Package Mfg. Co., Chicago, was presented an honorary plaque in recognition of his outstanding contributions to DISA and, through DISA, to the entire dairy industry. Only two other men have been so honored through the years. They are John H. Mulholland, of John H. Mulholland Co., Milford, Del., who received the award in 1948, and Ralph L. Young, of the Sharples Corp., Philadelphia, who was honored in 1949.

●

INDUSTRY PROBLEMS

(Continued from Page 40)

newspaper was doing its duty in not mentioning the matter in print, and that a newspaperman is completely competent and worthy *only after he learns that publicity is a double-edged sword,* that it can be greatly helpful to a community and also most harmful, if misused.

One thing I never thought about until now. Nobody during that whole feverish fortnight mentioned advertising. The dairy was carrying some advertising in the newspaper at the time and nobody mentioned it; nobody suggested that it be dropped, or that it be increased. I think all of us concerned would have felt that any reference to advertising or the commercial aspects of the thing would have been sickeningly indecent. Besides, we were too busy trying to learn where those bacteria came from, in that milk.

Finally, it is my belief that some of the milking machine manufacturers, in the urgency of competition, stress the "easy to clean," and "no parts to take apart" wording so strongly in their advertising and sales talks that many dairy farmers fail to appreciate how important regular and thorough cleaning of milking machine parts really is. Perhaps glib advertising writers in distant city offices should share the blame when the bacteria counts climb, on a dairy farm hundreds of miles away.

●

PLAIN TALK

(Continued from Page 58)

streptococci to survive also. If this were not so, pasteurized milk would never undergo souring; instead it would undergo protein decomposition with attendant foul odors and separation of the solids.

Thermoduric bacteria may come from the udder although they are not usually implicated in cases of mastitis. In fact, mastitis has almost been ruled out as a source of thermodurics. These have been found on the skin and hair of cows, on the dust particles circulating in the barn, and they are very plentiful in stable manure. They will grow well in milk films whether they be in the milking machine, strainer, the pail, or the can. They are present in large numbers in the vacuum hoses of milking machines when these are not washed daily and many have entered the milk supply from milk returned to the pail from the vacuum line.

The spreading organisms you have observed may also come from many sources. A few may be present in the udder but most of them probably come from contamination from the cow's skin, extraneous matter introduced into the milk or from improperly sterilized equipment. These spreading organisms are usually sporeformers and, as you know, bacterial spores are resistant to chemicals, to heat, and to drying.

We feel that it is impossible to make an accurate prediction as to the source of organisms in milk without on-the-spot inspection of the milking environment and equipment. Any diagnosis is at best a guess and may lead the fieldman astray in trying to deal with the farmer and improve the quality of the milk.

OPEN HOUSE

(Continued from Page 52)

your work. Show them the procedure for cleaning a holding tank and tell them how serious it would be even if one scratch got on the inside. This is extremely important and makes a deep impression; even on adults.

10. *DUTIES OF RELATIVES.* Be sure to point out the duties of any father, relative or neighbor working at the plant and point out the person in question if he is there at the time. If the man drives a truck, refer to it when the youngsters are shown the trucks.

11. *FREE DRINKS.* Don't forget to give them a taste of your milk!

12. BUT MOST IMPORTANT . . . REMEMBER, your plant must be clean and your employees tidy and polite . . . *AND* . . . if you wait until the newspaper or someone else makes charges against you and then hold "Open House", the accuser's position will be made stronger: "Didn't the newspaper really get 'Old Man Blank' on the ball and make him clean up his lousy milk plant", they'll be saying as they leave your place.

XUM

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finish check is to be sure that the product is completely sterile and that fruit solids, acids, and flavors are uniform.

The reconstituting process, which is done in the dairy plant, is a simple one but one that must be carried out under the same exacting sanitary standards that mark the concentrating process. Two methods are followed. The concentate may be cold packed, that is, the concentrate is mixed with the required amount of sugar and water in regular tanks or vats equipped with agitators. Another, more recent method, is the so called flash packing method. Here the mixing is the same as for the cold pack but the product is run through the flash pasteurizer at 168 degrees then through the fillers and into the bottles while still hot. Instead of being sealed with a paper plug-cap and the usual bottle a special narrow necked bottle and metal cap are used. Because it is hot when capped, a vacuum is created which enables the product to maintain its integrity even without refrigeration. The virtue of the flash packing method is that several days supply can be put up at once without regard to refrigerating space. Where every other day and three day a week delivery are practiced this is a distinct advantage.

There is a remarkable kinship between orange concentrates and dairy products. The sanitary standards of both products are of necessity very high. The processing equipment is finely made with an eye to ease and effectiveness of cleaning and elimination of off flavors through contact with undesirable metals. Both are subject to bacterial action although the degree and type may differ. Both are possessed of a delicate flavor that has won for each a high place in the world's esteem. Interesting as these similarities may be, however, the dairyman must look upon orangeade with an eye cocked for profit. In this category as in the others, the experience appears to demonstrate an intriguing similarity to milk. Both products, properly handled, are worthy of their hire. The gold in orange juice is not confined to its color.

"We'll have to set our mail box somewhere else. There goes the mail box again."